

A Special Study

Federal Blue-Collar Employees:

A Workforce in Transition



**A Report to the President and the
Congress of the United States by the**



Merit Systems Protection Board



U.S. MERIT SYSTEMS PROTECTION BOARD
Washington, D.C. 20419

December 1992

The President
President of the Senate
Speaker of the House of Representatives

Sirs:

In accordance with the requirements of the Civil Service Reform Act of 1978, it is an honor to submit this Merit Systems Protection Board report entitled "Federal Blue-Collar Employees: A Workforce in Transition."

The Federal Government relies extensively on the knowledges and skills of its civilian blue-collar workforce, yet there is little information in the personnel management literature about this component of the Civil Service. This report seeks to partially fill that void by providing an overview of the major issues involving these employees.

We find that blue-collar employees are confronted by some unique issues best addressed apart from their white-collar colleagues. We discuss the implications of these findings and make recommendations for improving the productivity and quality of this important segment of the Federal workforce.

We believe that you will find this report useful as you consider issues concerning the efficient and effective management of the Federal civilian workforce.

Respectfully,

Daniel R. Levinson
Chairman

Antonio C. Amador
Vice Chairman

Jessica L. Parks
Member

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Executive Summary

One out of every six Federal civilian employees works in a blue-collar job. Even though the nearly 350,000 blue-collar employees are an important part of the Government's workforce, they are being displaced at a rate far greater than their white-collar coworkers. Despite the decrease in their numbers, the importance of the blue-collar employees who remain will increase as defense spending shifts from the procurement of new systems to the maintenance and upgrading of existing systems.

The white-collar workforce tends to be the focal point when public personnel policies and programs are formulated, even though blue-collar employees are confronted by some unique problems and unresolved issues that need to be addressed apart from their white-collar colleagues. This study was conducted by the U.S. Merit Systems Protection Board (MSPB or the Board) as part of its statutory responsibility to provide the President and Congress with periodic reports on the health of the Federal Civil Service. The study examines the Federal blue-collar workforce and provides an overview of the major issues involving this crucial and sometimes overlooked segment of the Federal civilian employee population. The Board identifies several impediments to the effectiveness of the Federal blue-collar workforce and offers some suggestions for overcoming them.

Background

The Federal blue-collar workforce is a critical component in the Government's ability to maintain our country's national parks, provide for our country's defense, serve our country's veterans, and maintain the Government's buildings and facilities. Its nearly 350,000 employees work in over 300 occupations, many of which require highly technical trades and craft skills and knowledges. Contracting-out, automation, changes in technology, and other factors have decreased the Federal blue-collar workforce by about one-third since 1970. Today, because 78 percent of the blue-collar employees work in defense agencies, the blue-collar workforce faces the brunt of the Government's workforce

reductions. In FY 1991 alone, blue-collar employees accounted for 71 percent of the 5,753 employees who were separated from their Civil Service jobs and future cutbacks are expected to continue to disproportionately affect this workforce.

Although there are many similarities, Federal blue-collar employees differ substantially from their white-collar coworkers in a number of ways. Besides the obvious differences in the nature and location of the work itself, blue-collar employees, as a group, have less formal education, have greater ties to the local community, and generally have fewer options for advancement than white-collar employees. While most Federal personnel management systems do not differentiate between blue-

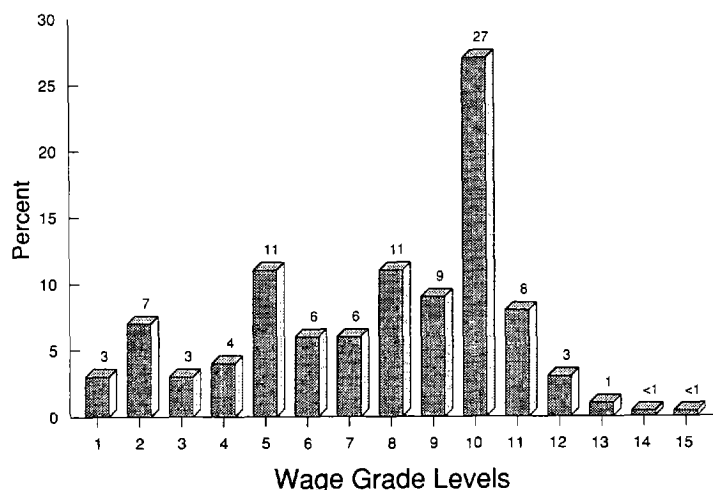
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and white-collar employees, there are major differences in the pay and classification systems of these two employee groups. In addition, MSPB survey and interview data indicate that many blue-collar employees believe they are treated as second-class citizens in the workplace. A better understanding of these perceptions and the human resource management issues and problems unique to the blue-collar workforce provides a base from which sound public personnel policies and solutions can be fashioned.

Findings

- ❑ Many blue-collar employees are in job situations where there is little room or expectation for advancement. Almost 40 percent of the blue-collar employees are in grades 10 or higher (out of 15 possible wage grade levels), as shown in figure A. In addition, as shown in figure B, over half (56 percent) are at the top step (step 5) of their grade, which they reach in just 6 years compared to the 18 years it normally takes white-collar employees to progress through the 10 steps in the white-collar grade structure.
- ❑ Blue-collar employees represented 26, 45, and 71 percent of all layoffs Governmentwide in FY 1989, FY 1990, and FY 1991, respectively. A drop in employee turnover rates since FY 1989 and large future cutbacks are expected to make it more difficult for the Government to reduce its workforce by relying on attrition and hiring restrictions alone and may require more extensive use of reduction-in-force (RIF) procedures.
- ❑ In FY 1989, blue-collar employees were *more likely* (3.3 percent vs. 2.2 percent) to leave the Government by *retiring* and *less likely* (2.6 percent vs. 4.9 percent) to leave by *resigning* compared to white-collar employees. The overall blue-collar turnover rate was similar (7.2 percent vs. 8.0 percent) to the white-collar rate.
- ❑ Except for the pay cap, blue-collar employees in step 5, receive pay that is 12 percent *higher* than the prevailing local rate. The Federal Wage System (FWS) in 1972 directed that Federal blue-collar employees be paid in line with prevailing levels of pay in the local area. Wage surveys of private sector employers determine the prevailing rates of pay in 135

Figure A Distribution of Blue-Collar Employees by Grade Levels



Source: Office of Personnel Management
Central Personnel Data File, March 31, 1991.

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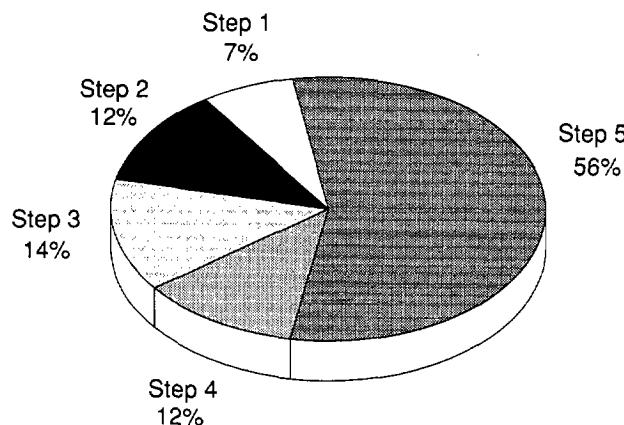
local wage areas. However, FWS sets the prevailing rate at step 2 of the 5-step wage grade, and blue-collar employees above step 2 are paid a rate *higher* than comparable employees in the private sector.

- ❑ Some 14 years of successive pay caps have resulted in an average pay gap of about 9.6 percent between the blue-collar pay rate and the private sector pay rate. Although the effect of this gap is mitigated because most blue-collar employees receive rates higher than those at step 2, serious pay anomalies and much larger pay gaps (30 percent or more) are being experienced in *some* wage areas and for *some* grade levels.
- ❑ Except for pay and classification, most Federal personnel management systems, programs, and regulations do not differentiate between blue- and white-collar employees. Some of the more notable differences included restrictions on compensatory time for blue-collar employees, the absence of Quality Step Increase incentive awards for blue-collar employees, and the absence of the 52 week "time in grade" waiting

period before blue-collar employees become eligible to compete for promotion to the next higher grade level.

- ❑ In addition to having concerns about downsizing, low morale, and in some instances, pay, blue-collar employees:
 - Feel they are treated as second-class citizens in their organizations;
 - Believe the quality of their supervisors needs to be improved;
 - Cite numerous problems with their performance appraisal process; and
 - Express a need for more training.
- ❑ Demographically, the blue-collar workforce is similar to the white-collar workforce in terms of age and length of service; however, the two employee groups differ substantially on other background variables. For example:
 - Women represented just 10 percent of the blue-collar workforce in 1991 but were 49 percent of the white-collar workforce;

Figure B. Distribution of Blue-Collar Employees by Pay Steps



Source: Office of Personnel Management, Central Personnel Data File, March 31, 1991.
Note: Percents do not total 100 because of rounding.

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- Minority group members comprised 34 percent of the blue-collar workforce in 1990—a share that is above the 22-percent national average—although Hispanics remain underrepresented; and
- While 93 percent of the Government's blue-collar employees were represented by unions in 1991, 53 percent of the white-collar employees were similarly represented.

Recommendations

- 1. Federal policymakers and managers are encouraged to explicitly consider tailored provisions for blue-collar employees in proposed programs, policies, rules, and regulations on the Federal workforce.** While there are many similarities between blue- and white-collar employees, the blue-collar workforce also has many different needs and concerns. Policies and programs are likely to be most effective when they are tailored to the special needs of these two major subgroups. Particular attention needs to be directed towards ensuring that the downsizing minimizes the harmful effects on those being displaced and that workforce or succession plans ensure that there will be an appropriate mix of blue-collar workers to meet future as well as current needs of the Government. Such plans should address not only the costs and numbers involved but should also consider the views of those affected; ensure that gains in minority representation are not jeopardized; and promote an environment more attractive for women and Hispanics who wish to enter blue-collar occupations.
- 2. The Office of Personnel Management (OPM) should continue to develop and implement a strategy for phasing out the blue-collar pay cap and for more closely aligning blue- and white-collar pay-setting practices.** The perceived inequity and negative effects of the pay cap on blue-collar employees and the increasingly problematic pay gap require an early remedy to ensure that they do not impair the Government's ability to acquire, retain, and motivate a high quality blue-collar workforce. The June 1992 OPM "Report to Congress on the Federal Wage System: Pay Problems and Pay Cap Phaseout" is a useful first step. This effort will require input from multiple players. Special efforts should be made to explore alternative compensation practices and to address the broader work issues that contribute to blue-collar employees' perceptions of second-class treatment.
- 3. OPM and Federal managers are encouraged to address the issues that concern the blue-collar employees who remain.** The need for a sizable blue-collar workforce should not be overlooked; neither should the realization that keeping the status quo for the remaining blue-collar staff will not be sufficient. Given the relatively limited opportunities for advancement or promotion, work environment issues become relatively more important for blue-collar employees. Efforts should be made to identify and remove barriers between blue- and white-collar workers, to increase the self-esteem of the blue-collar workforce, and to promote greater participation of blue-collar employees in the decisions affecting their work. Particular attention should be directed towards improving the quality of blue-collar supervision, promoting programs of continuous development and education for blue-collar employees, and enhancing the performance management process.

Introduction

They comprise about one-sixth (17 percent) of the Federal workforce; they maintain our national parks, Government facilities, and equipment; they help serve our Veterans; they are an integral component of our national defense; and they rose to the occasion when called upon to support our troops during Operations Desert Shield and Desert Storm. As a group, they are among the Nation's most dedicated and motivated employees, many with highly technical and specialized skills. The last 20 years have seen their numbers decrease by about one-third, and they currently face the brunt of the Government's workforce reductions. During FY 1991, they accounted for 71 percent of the 5,753 Federal employees involuntarily separated in reductions in force. Who are these workers? They are our Government's blue-collar employees, one of our most unheralded and little-known resources.

Because of the relative paucity of information in the general personnel management literature about these employees, their key role in many of our organizations, and their current critical position as defense agencies undergo significant downsizing, the U.S. Merit Systems Protection Board (MSPB or the Board) conducted this study as a beginning step in closing the information gap. The Board—an independent Federal agency—conducted this study as part of its statutory responsibility to protect the merit basis of the U.S. Civil Service as well as other Federal merit-based personnel systems. As indicated more fully below, our intent in this report is to provide information for policymakers and managers to use in making critical decisions affect-

ing this key component of the Federal workforce in these changing and uncertain times.

Background

Our Government's blue-collar employees number nearly 350,000 and work in over 300 occupational series as diverse as electronics mechanic, laundry worker, carpenter, and aircraft mechanic. While most blue-collar work is manual, often requiring considerable dexterity and physical movement, it usually requires specialized knowledges of trade theories and operations. Blue-collar employees can be found in Government agencies in all 50 States, with particularly heavy concentrations in the shipyards, aviation depots, arsenals, air logistics centers, and other industrial facilities of the defense agencies.

The dramatic changes precipitated by the end of the Cold War, the Nation's economic difficulties, and the uncertainties surrounding major cutbacks in defense spending require Federal managers and policymakers to make difficult decisions in which blue-collar employees emerge as an increasingly critical component. In making these decisions, it is important that the Government, as a model employer, considers the human element and makes all fiscally responsible efforts to minimize the harm to those who may be displaced and their families. Furthermore, poor decisions and planning could not only unnecessarily harm displaced workers and their families but could also seriously diminish valuable expertise, erode morale, decrease the productivity of

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those who remain, and damage the reputation of the Federal Government as an employer.

Clearly, there is much uncertainty concerning the changes in our Nation's labor economy. Experts disagree widely about projected labor shortages and job-skill mismatches in the United States in the rest of the 1990's and beyond. Since many of the decisions to be made involve cutbacks and shifts in the defense program and its heavy industrial blue-collar base, the Government's blue-collar employees will inevitably continue to bear a disproportionate share of the downsizing. While base closings are scheduled to provide considerable lead times, the planning for adjustments in weapons programs is much less certain.¹ The sudden cancellation or major cutback in a large program can result in the loss of many blue-collar jobs—both Government and non-Government—and can have a severe negative impact on a Federal installation dependent on the program.

Despite their critical role, there is relatively little written in the general literature about Federal blue-collar workers, about what they do, about where they work, or about their views on job-related issues. If blue-collar employees (sometimes referred to as wage-grade employees; wage system employees; prevailing rate employees; or trades, craft, and

Upper level managers have no real knowledge of how I or fellow coworkers actually produce a product.

Aircraft Mechanic, WG-10

labor employees) are included in studies at all, their views have typically received little separate analysis or interpretation. Except for pay and classification, Governmentwide personnel management systems rarely differentiate blue-collar employees from the

predominantly white-collar workforce, making it virtually impossible to identify and assess blue-collar needs and issues.

Blue-collar work is generally performed in areas segregated from white-collar work. Thus, although there are exceptions, white-collar employees, on the whole, have relatively little interaction with blue-collar employees. This is particularly true for white-collar policymakers and managers at headquarters installations that often are far removed from most blue-collar worksites. Given the physical as well as interpersonal separations between these two groups, it is important that decisions affecting blue-collar employees not be based solely on statistics and the immediate needs of the organization, but that they also include fuller consideration of the welfare and the particular needs of this relatively unknown component of the Federal workforce.

Although this report is about blue-collar employees Governmentwide, the emphasis necessarily must be on the blue-collar employees in the Department of Defense (DOD) agencies, which by far represent the bulk of the Government's blue-collar workforce, including many of its most highly graded and skilled workers. In the defense agencies, blue-collar employees may represent as many as one-third of an agency's workforce. At some installations, the percentages are much higher. At these installations, particularly those slated for closure, blue-collar employees are most vulnerable to the downsizing initiatives. Much of downsizing and closure involves a permanent elimination or reduction of blue-collar work.

Study Purpose and Objectives

When different employee subgroups have different interests and needs, strategies to manage these subgroups and improve their productivity are most effective when the strategies are tailored to the special needs of each of the major subgroups.² Thus,

¹ Office of Technology Assessment, "After the Cold War: Living with Lower Defense Spending," OTA-ITE-525 or ISBN0-16-036108-7, Washington, DC, February 1992, p. 9.

² Joan R. Rentsch, "Climate and culture: Interaction and qualitative differences in organizational meanings," *Journal of Applied Psychology*, vol. 75, No. 6, pp. 668-681.

greater awareness of the capabilities and attitudes of Federal blue-collar employees, in conjunction with an understanding of the differences in their personnel management systems compared to the white-collar systems, should help managers and policymakers tailor their decisions to the needs and concerns of these civil servants. To this end, we designed this study to consolidate available information about Federal blue-collar employees, to provide an introduction to their views and concerns, and to highlight some of the major issues affecting them. The improved awareness and understanding that should result are important first steps in improving the quality, well-being, and long-term effectiveness of this component of the Federal Civil Service.

The issues highlighted in this study are not the only ones of concern, but are the ones that repeatedly came up during the course of the study as ones warranting consideration. Among these issues are: pay and classification, morale, downsizing, general management and supervision, performance appraisal, and training. As will become more apparent during this report, although each of these issues is not unique to blue-collar employees, they take on a special meaning when they apply to this group of civil servants. Just as negative changes in any of these areas are likely to have negative consequences in terms of morale and productivity, positive changes can have significant benefits for the Government and the American public. Our objective in discussing these issues is not to predict or prescribe but to educate and assist managers and policymakers in seeing new relationships and in answering new but relevant questions about blue-collar work and workers. At times the presentation raises macro-level issues best addressed by Congress and the Office of Personnel Management (OPM); at other times, the issues are more relevant to agency decisionmakers, managers, and supervisors of blue-collar employees.

The focus of this report is on the appropriated fund blue-collar employees in the Federal Wage System. These employees are in the U.S. Civil Service. Nonappropriated fund blue-collar employees are not included here. As the name implies, Congress does not appropriate funds to pay these employees,

and while they are considered Federal Government employees for some purposes, they are not included in the U.S. Civil Service. Nonappropriated fund employees typically work in the exchanges, service clubs, and various eating and drinking establishments of DOD and the Department of Veterans Affairs (VA). Whenever appropriate in this report, we make relevant comparisons with the Federal white-collar workforce. These comparisons generally are made to white-collar employees in the General Schedule (both GS and GM), who comprise the vast majority of the Government's white-collar workforce.

Study Approaches

This study relies on a mixture of information sources and data-gathering approaches. Some are quantitative, others are more exploratory and qualitative. First, we consolidated and examined existing data and the personnel management literature about Federal blue-collar employees. From this we derived the definition of blue-collar work and the general characteristics of the blue-collar workforce.

Second, we examined the major demographic characteristics of the Government's blue-collar workforce and determined how its size and composition have changed over the last two decades. Third, we examined how the blue- and white-collar personnel management systems differ from one another and the origins of some of the differences. Particular focus was placed on the pay and classification systems, where the personnel management differences are greatest.

Fourth, we discuss downsizing and its impact on the blue-collar workforce and look briefly at union involvement and Total Quality Management as these uniquely relate to the blue-collar workforce. Finally, we investigated the attitudes and perceptions of Federal blue-collar employees about a range of job-related matters. These data were derived from (a) responses to MSPB's Merit Principles Survey administered in FY 1989; (b) site visits and interviews with key officials, managers, and union representatives knowledgeable about blue-collar employees; and (c) questionnaires given to and

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group interviews conducted with 153 blue-collar employees and 116 first-line blue-collar supervisors.³ We administered the questionnaires and conducted the group interviews during 1991 at a cross-section of nine Federal installations in six executive branch agencies⁴ with relatively large numbers of blue-collar employees.

Many of the data we present are descriptive and aggregated across Federal blue-collar employees

nationwide. Because the data are extremely dynamic and often derive from diverse sources and different timeframes, raw numbers will vary somewhat from analysis to analysis. Furthermore, for the purposes of this presentation, descriptions of many of the management systems and issues have been simplified. The systems and issues are inevitably more complex.

³ Unless otherwise indicated, "blue-collar supervisors" refers to supervisors who are themselves blue-collar employees.

⁴ The six executive branch agencies in the study were: Army, Navy, Air Force, Interior, Veterans Affairs, and General Services Administration.

Federal Blue-Collar Work and Workers

Although the Government's blue- and white-collar jobs have a long history of being treated as two distinct classes of jobs, there is relatively little written about their differences. A review of popular texts on public personnel administration and management or histories of the U.S. Civil Service reveals few specific references to blue-collar work or workers. Individual agencies with large numbers of blue-collar employees may have detailed studies and analyses of these employees; however, at the national level, relatively few studies, executive orders, or legislative actions distinguish between blue- and white-collar employees.

Definition of Blue-Collar Work

According to title 5 of the United States Code, subchapter IV, section 5342 a(2), a blue-collar or prevailing rate employee is defined as:

An individual employed in or under an agency in a recognized trade or craft, or other skilled mechanical craft, or in an unskilled, semiskilled, or skilled manual labor occupation, and any other individual, including a foreman and a supervisor, in a position having

trade, craft, or laboring experience and knowledge as the paramount requirement.

Although there have been and always will be some gray areas, the distinctions between blue- and white-collar work generally are considered clear-cut, and classifiers "rarely face problems [distinguishing between blue- and white-collar work]."⁵

Levels of Blue-Collar Work

Briefly, there are three main categories (or pay schedules) of blue-collar employees: nonsupervisory wage grade (WG) employees, work leaders (WL), and work supervisors (WS).⁶ WG employees comprise 84 percent of the Federal blue-collar workforce, and the occupations in which they work are graded on 15 levels, designated WG-1 through WG-15. WL and WS comprise 4 and 10 percent of the blue-collar workforce, respectively; while the remainder (2 percent) are in special pay plans for occupations in foreign territories or U.S. possessions, for occupations with recruiting or retention problems, or for occupations with other special requirements.⁷

⁵ U.S. Office of Personnel Management, "The Classifier's Handbook," Position Classification Standards, pub. TS-107, Washington, DC, August 1991, p. 34.

⁶ Throughout this report, we use the term "supervisor" to refer to blue-collar supervisors, rather than the traditional designation of "foreman." This is consistent with the terminology of OPM's pilot "Job Grading Standards for Federal Wage System Supervisors," Apr. 1, 1990.

⁷ U.S. Office of Personnel Management, Central Personnel Data File, Mar. 31, 1991, "FWS Grade/Step Distribution," data run of July 17, 1991.

Federal Blue-Collar Work and Workers

Blue-collar grade levels include 5 pay steps and employees can be expected to reach step 5 in 6 years. This is in marked contrast to white-collar grade levels which include 10 pay steps and where employees who perform satisfactorily can expect to advance through the 10 steps in 18 years. As will be discussed in more detail later in this report, this difference in the number of within-grade steps contributes importantly to the career advancement and pay differences between blue- and white-collar employees.

The full-performance or journey-level grade of some WG occupations, such as laundry worker, may be as low as WG-1 or WG-2. In such occupations, the opportunities for advancement are

virtually nonexistent. However, in occupations such as automotive mechanic, workers can advance from helper positions (WG-5) through intermediate worker positions (WG-8) to the full-performance level at WG-9 or WG-10. For other occupations, WG-5 or WG-8 may be the journey-level grade. The three boxed inserts in the following pages provide examples of the kind of work performed by blue-collar employees at three different grade levels.

Recruitment and Advancement in Blue-Collar Occupations

For many blue-collar occupations that have private sector counterparts, applicants can be and often are

Aircraft Mechanic (WG-10)

Average annual pay (March 1991): \$29,200.

Makes repairs, adjustments and modifications to a variety of fixed and rotary winged aircraft systems, airframes, components, and assemblies. Within the framework of discrepancies noted by the pilot, inspection reports, periodic maintenance checklists, or engineering modification work orders, determines nature and extent of repairs or adjustments required on engines, fuel systems, landing gear, flight control surfaces and systems, heating, cooling and de-icing systems, and hydraulic systems.

Following instructions contained in technical manuals or engineering work orders, removes items to be inspected, repaired, or replaced; installs, makes adjustments, and makes repairs to items. Installs and adjusts engine accessories, control surfaces, fuel tanks and lining, oil, fuel and hydraulic fluid tubing, propellers and propeller governors, wings, seats, tail assemblies, armament mounts, canopies, wheels, and landing gear mechanisms. Makes visual and functional check of items installed, repaired, or adjusted.

Uses hand tools, power tools, jigs, fixtures, test stands, external power sources, and specialized measuring instruments such as gages, micrometers, vernier calipers, and templates. Uses a knowledge of overall aircraft systems.

Makes independent judgments and decisions within the framework of oral and written instructions and accepted trade practices, processes, and procedures while completing assignments.

Continually handles objects weighing up to 20 pounds and occasionally weighing up to 50 pounds. Frequently works in awkward and cramped positions.

Works inside in areas that are usually noisy, dirty, and greasy, and outside, sometimes in bad weather. Is exposed to the possibility of cuts, bruises, shocks, scrapes, broken bones, and burns.

Source: U.S. Office of Personnel Management, *Federal Personnel Manual—Supplement 532-1, "Federal Wage System, Appendix I,"* Washington, DC, June 29, 1984, pp. 1-12.

Federal Blue-Collar Work and Workers

Materials Handler (WG-5)

Average annual pay (March 1991): \$22,200.

Receives, stores, and ships bin and bulk supplies, materials, and equipment. Verifies quantity, nomenclature and unit of issue against receiving documents; notes discrepancies and reports findings. Selects specific storage locations within the framework of general warehousing plan. Stores, stacks, and palletizes items considering use, size, shape, weight, quantity, spoilage, pilferage, contamination, and safety to others. Examines stock for deterioration and damage and reports findings. Conducts inventory of stock on hand and reports reasons for overages, shortages, and misplacements. Selects designated items from storage and assembles for shipment. Assures that items are properly marked, tagged, and labeled and in properly marked containers.

Accomplishes final loading in trucks and freight cars. Completes and signs receiving and shipping documents. Records and updates stock location cards showing location, nomenclature, stock number, quantity on hand, and unit of issue. Uses hand tools. Moves stock by hand, handtruck, and dollies.

Follows accepted warehousing methods, procedures, and techniques and various written or oral instructions on day-to-day operations.

Frequently handles objects weighing up to 40 pounds.

Works inside in areas that are sometimes damp and drafty and outside, sometimes in bad weather. Is exposed to the possibility of cuts and bruises.

Source: U.S. Office of Personnel Management, *Federal Personnel Manual—Supplement 532-1, "Federal Wage System, Appendix I,"* Washington, DC, June 29, 1984, pp. 1-12.

Laundry Worker (WG-1)

Average annual pay (March 1991): \$16,200.

Does various manual duties in a laundry. Shakes out and separates different laundry items. Hand feeds items into automatic flatwork ironer or spreader by holding items, straightening edges and smoothing wrinkles. Catches, folds, and stacks flatwork. Wraps and seals laundry bundles, and ties by hand or with automatic tying machine. Wipes off laundry equipment.

Follows a few specific and easily understood oral instructions to perform assignments.

Continually handles objects weighing up to 10 pounds and occasionally objects weighing up to 20 pounds.

Works inside in areas that are usually hot, humid, and noisy. Is exposed to the possibility of cuts and bruises.

Source: U.S. Office of Personnel Management, *Federal Personnel Manual—Supplement 532-1, "Federal Wage System, Appendix I,"* Washington, DC, June 29, 1984, pp. 1-12.

Federal Blue-Collar Work and Workers

hired at the full-performance level. For other blue-collar occupations that are more unique to the Government, applicants are typically hired at an entry level grade and then through an apprentice or other career development program advance *noncompetitively* to the full-performance or journey level. Individuals who are not in developmental positions must typically *compete* for each promotion to higher level positions. Although these entry and advancement processes are not unlike those for many white-collar employees, developmental programs or career tracks tend to be considerably less common among blue- than white-collar occupations.

Benefits of Federal service are good but their usefulness is limited. We get locked into a competition for lateral movement, and upward movement is limited or nonexistent.

Electronics Mechanic, WG-10

Nonsupervisory employees at the full-performance or journey level who wish to advance may compete to become inspectors (also a WG position, but one that is usually at a higher grade level) or work leaders (in the WL pay schedule). Work leaders are nonsupervisors, who in addition to their journey-level work have duties that include passing on supervisor instructions to other workers, demonstrating proper work methods, and ensuring that needed materials are available, that there is enough work, and that work is progressing on schedule. Work leaders are paid 10 percent above the WG pay schedule. Unlike supervisors (who are in the WS pay schedule), work leaders do not plan, schedule, and direct work operations; evaluate and rate subordinates on their work; or deal with employee complaints, suggestions, and grievances. Work leaders may compete for and progress through

various levels of supervisor, depending on the size of the installation. Supervisors are compensated at least 30 percent above the WG pay schedule, depending on the grade levels and variety of employees supervised.

In addition to progressing through the WL and WS career paths, blue-collar employees may advance by competing for openings in related blue-collar occupations, such as planners, estimators, examiners, and schedulers. Sometimes, blue-collar employees advance by qualifying and competing for position vacancies in related white-collar occupations, such as technician, quality assurance specialist, equipment specialist, production controller, or training instructor.

Although each of these various advancement options offers opportunities for increased pay and responsibility, the availability of the options is often limited, particularly at the smaller installations. The range of opportunities available will vary considerably by the type of occupation, the grade level, and the number of applicants competing for available openings. Generally, opportunities for advancement decrease as the occupations are more specialized, have fewer or lower graded levels, or have many applicants for few vacancies.

Current Size of the Blue-Collar Workforce

As of September 30, 1991, there were 347,362 full-time civilian blue-collar Federal employees in over 300 different trades, crafts, and labor occupations, *excluding* employees in the U.S. Postal Service and other quasi-governmental agencies or corporations.⁸ This total represents about 17 percent of the Government's approximately 2 million full-time civilian employees. Only 2 percent of the blue-collar employees work overseas, and 6 percent work in the Washington, DC, Metropolitan Statistical Area.⁹ The large majority (92 percent) of blue-collar

⁸ OPM, Central Personnel Data File, September 1991, "User Inquiry Summary," data run of Mar. 16, 1992.

⁹ Foreign nationals, who are in an employment system not included in this report, account for most of the Government's blue-collar workers overseas.

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employees work in Government facilities located throughout the 50 States.¹⁰

What Blue-Collar Workers Do

Federal blue-collar employees work in over 300 widely varying occupational job series, as noted earlier in this report. Many have advanced technical skills in areas such as machine tool work, metal processing, plumbing and pipefitting, and wood working. Many others apply their advanced skills to the installation, repair, overhaul, and maintenance of engines, power plants, mobile equipment, aircraft, ships, industrial utility systems, and a wide variety of electronic equipment.

Some blue-collar employees operate motor vehicles, including trucks, tanks, cranes, drilling rigs, fork-lifts, and tractors; others operate and maintain the Government's stationary systems, such as boiler plants, electric power plants, air conditioning systems, water or sewage treatment plants, and fuel distribution systems. Still others operate highly specialized equipment, such as testing equipment, sandblasters, plasma cutters, dredges, and packing machines. Large numbers of blue-collar employees receive, inspect, store, retrieve, and ship the Government's huge and valuable inventory of parts, tools, and equipment, while others maintain the numerous Federal buildings, parks, and related facilities.

Many jobs may require considerable dexterity, physical exertion, or physical movements, such as walking, crawling, and bending. Others may require prolonged periods of standing in place. Some jobs involve travel (local and otherwise) to different worksites; other jobs are largely sedentary. While much work is solitary, many blue-collar employees work as members of teams.

Blue-collar work environments vary considerably. While the production, repair, or calibration of sensitive electronic or measuring equipment may require worksites that are temperature-controlled,

well-lit, and free of noise, static, and dust, many other jobs require employees to work in all kinds of temperatures and weather, to wear cumbersome protective clothing, to work in high or cramped spaces, to work with hazardous chemicals or explosives, to work around loud noises, dirt, dust, grease, fumes, or other stressful conditions, and to be exposed to the possibilities of cuts and bruises.

The building we work in is 13 years too old, was not designed for the work we do (radio repair), and can not be kept clean.

Electronics Mechanic, WG-10

Although there are exceptions, notably absent from the Federal blue-collar workforce are construction workers. The Government typically contracts for the construction of buildings, roads, bridges, and other such labor-intensive and one-time construction projects.

Nine blue-collar occupations have at least 10,000 employees.¹¹ These occupations and the approximate number of employees in each are:

Materials Handler (formerly Warehouse Worker)	23,000
Custodial Worker	15,000
Aircraft Mechanic	14,800
Electronics Mechanic	13,700
Maintenance Mechanic	12,800
Heavy Mobile Equipment Mechanic	12,000
Sheetmetal Mechanic	10,800
Food Service Worker	10,400
Motor Vehicle Operator	10,300

Many of these and most blue-collar jobs are in what the General Accounting Office (GAO) describes as DOD industrial and commercial operations; i.e.,

¹⁰ U.S. Office of Personnel Management, "Federal Civilian Workforce Statistics: Occupations of Federal White-Collar and Blue-Collar Workers, Washington, DC, Sep. 30, 1989," p. 146.

¹¹ OPM, Central Personnel Data File, September 1991, "User Inquiry Summary," data run of Mar. 16, 1992.

Federal Blue-Collar Work and Workers

Table 1. Profiles of Federal Blue-Collar and White-Collar Employees

Item	Blue-Collar	White-Collar
Average age (years) ¹	43.8	42.4
Under 30 years (percent)	9	14
Over 50 years (percent)	26	24
Average length of service (years) ¹	14.4	13.3
Fewer than 10 years (percent)	34	43
Over 20 years (percent)	26	25
Average salary (in \$1,000) ²	28	35
Employees in bargaining units (percent) ²	93	53
Percentage women ³	10	49
Percentage minority ⁴	34	26
Black	20	17
Hispanic	7	5
Other	7	4
Percentage with disabilities ⁵	9	6
Education (percentages with): ⁶		
Bachelor's (BA, BS) degree or more	3	44
2-year college degree (AS, AA)	17	10
More than High School, no 2-year degree	29	34
High school diploma or equivalent	21	10
Less than high school	5	— ⁷
Sources/Notes:		
¹ Office of Personnel Management, Central Personnel Data File, December 1991, "User Inquiry," Apr. 23, 1992.		
² Ibid., September 1991, "User Inquiry," Mar. 16, 1992.		
³ Ibid., September 1991, "User Inquiry," Mar. 13, 1992.		
⁴ U.S. Office of Personnel Management, "Affirmative Employment Statistics, Sep. 30, 1990," Washington, DC, p. 44.		
⁵ Ibid., p. 8.		
⁶ "MPS" data are from MSPB's 1989 Merit Principles Survey.		
⁷ Less than 1 percent.		

"Federally owned manufacturing and service activities that generate revenues through the sale of goods and services to others."¹² Usually, the goods and services are provided directly to the military branch that owns and operates the activity, but not infrequently work is performed for other customers, including foreign governments.

Only about one-fourth of the Government's blue-collar employees work in nondefense agencies. Of these, most work in VA Medical Centers and national parks, but also in and around the buildings and facilities of most Federal agencies. Blue-collar employees in these agencies typically include custodial workers, laborers, food service workers,

¹² U.S. General Accounting Office, "Defense Force Management: Limited Baseline for Monitoring Civilian Force Reductions," GAO/NSLAD-92-42, Washington, DC, February 1992, p. 1.

cooks, maintenance or utility mechanics, tools and parts attendants, air-conditioning mechanics, and motor vehicle operators.

Demographic Profile of Blue-Collar Employees

As for all employee subgroups, generalizations and aggregated statistics only begin to describe the diversity of blue-collar employees. Nevertheless, it is useful to start with the large perspective, particularly how blue-collar employees—as a group—compare with white-collar employees. This helps to establish when the two groups might be treated similarly and when it may be necessary to tailor policies and programs to the special needs of each group.

Using data from several sources, table 1 shows that the Government's blue-collar workforce is just slightly older and has just slightly more length of service than its white-collar workforce. These slight differences reflect the smaller percentage of younger and less experienced workers in the blue-collar workforce. This may already be beginning to reflect the effects of the Government's downsizing, which tends to have the greatest impact on younger employees and those with less experience.

The largest blue- and white-collar demographic differences are in the level of union representation, amount of education above the high school level, and representation of women. While 53 percent of white-collar employees are represented by labor organizations, 93 percent of blue-collar employees are represented.¹³ As will be discussed in more detail later in this report, this substantial difference in union representation importantly influences the way managers and policymakers can initiate change among these two employee groups.

As expected, blue-collar employees have fewer of the 4-year college degrees so typical of Federal

white-collar employees—3 percent versus 44 percent, according to the 1989 Merit Principles Survey (MPS). Nevertheless, over half (55 percent) of the blue-collar employees who completed the MPS reported some education or technical school training beyond high school. Some 17 percent reported having at least a 2-year college degree.

Compared to their large proportion (49 percent) in the Government's white-collar labor pool, women represent only about 10 percent of the Federal blue-collar workforce. Of the 37,000 blue-collar workers who are women, about half work in just seven occupations: Food Service Worker, Electronics Mechanic, Cook, Packer, Materials Handler, Laborer, and Custodial Worker. There are at least 1,000 women in each of these occupations; however, only in the category of Food Service Worker are women in the majority, at 62 percent; fewer than 30 percent of the workers in each of the remaining six occupations are women.¹⁴

These findings suggest that there may still be substantial barriers to women who may wish to enter blue-collar occupations, particularly the more traditionally male occupations. For example, only 380 (0.2 percent) of the Government's 15,342 aircraft mechanics in 1989 were women. Representation is only slightly higher even in a lower graded occupation such as motor vehicle operator, which has traditionally been considered a male occupation.¹⁵ Of the 11,104 motor vehicle operators in 1989, 516 (0.5 percent) were women. These statistics are consistent with a recent GAO study which showed that during the 14-year period 1976-90, virtually none of the Government's 28-percent increase in the number of women employees (from 35 percent to 43 percent of the total Federal workforce) came in blue-collar occupations, even though there was (and still is) the greatest room for improved representation in this occupational group.¹⁶

While women are underrepresented in blue-collar jobs, members of minority groups are well-repre-

¹³ Supervisors, managers, and certain other professional and confidential employees are ineligible for union representation.

¹⁴ See pp. 180-185 of the source in footnote 10.

¹⁵ Ibid.

¹⁶ U.S. General Accounting Office, "The Changing Workforce: Demographic Issues Facing the Federal Government," GAO/GGD-92-38, Washington, DC, March 1992, p. 40.

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Table 2. Distribution of Federal Blue-Collar Employees, by Grade Level

Average Grade Level	Average Percent of WG	Hourly Pay Rate ¹	Annual Pay ²
WG			
1	3	7.76	16,195
2	7	8.80	18,366
3	3	9.36	19,534
4	4	9.79	20,431
5	11	10.63	22,184
6	6	11.43	23,854
7	6	11.91	24,856
8	11	12.41	25,900
9	9	13.22	27,590
10	27	14.00	29,218
11	8	14.71	30,700
12	3	15.19	31,702
13	1	16.08	33,559
14	— ³	16.70	34,853
15	— ³	14.92	31,138 ⁴
WG ave.	100	12.33	25,733
WL ave.		14.26	29,761
WS ave.		17.29	36,084

¹ Actual pay rates may be higher or lower, depending on the step within each grade and the wage area. Rates change continually since wage area surveys become effective at different times throughout the year.

² Based on 2,087 hours.

³ Less than 1 percent.

⁴ The pay inversion between grades 14 and 15 may be the result of several factors, including differences in the distribution of these employees in the different steps and wage areas.

Source: U.S. Office of Personnel Management, Central Personnel Data File, Mar. 31, 1991, "FWS Grade/Step Distribution," data run of July 17, 1991.

sented. About one-third (34 percent) of the Federal blue-collar workforce are members of minority groups. This is well above the percentage of minorities (22 percent) in the national civilian labor force. Minority representation among Federal blue-collar employees exceeds that for Federal white-collar employees for all minority subgroups. Representation of minority subgroups among Federal blue-collar employees also exceeds that of the Nation's civilian labor force for all subgroups except Hispanics. While Hispanics comprise 9 percent of the Nation's civilian labor force, they represent 7 percent of the Federal blue-collar workforce and 5 percent of the white-collar workforce.¹⁷ As mentioned in the beginning of this report, if blue-collar employees continue to be overrepresented among employees separated during reductions in force, any gains achieved in the representation of members of minority groups in the blue-collar workforce may be at risk.

Some 31,000 Federal employees with disabilities hold blue-collar jobs. Disabled employees represent about 9 percent of the blue-collar workforce, with the largest single disability being "hard of hearing." Seven out of ten disabled employees

¹⁷ U.S. Office of Personnel Management, "Affirmative Employment Statistics, September 30, 1990," Washington, DC, Jan. 1991, p. 4.

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Table 3. Percent of Federal Blue-Collar Employees at Each Pay Step

Pay Step	Percent of Employees
1	7
2	12
3	14
4	12
5	56

Source: U.S. Office of Personnel Management, "Federal Wage System," briefing slides of March 1992. Percents do not total 100 because of rounding.

work for defense agencies or the Department of Veterans Affairs.¹⁸

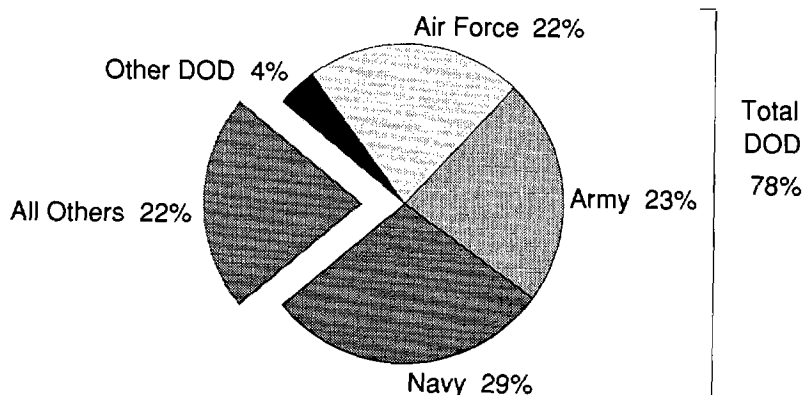
About 40,000 blue-collar employees are supervisors. This is about 11 percent of the blue-collar population, which translates into a supervisor-employee ratio of about 1 to 8.¹⁹ The supervisor-employee ratio for white-collar employees is about the same but drops to 1 supervisor per 6 employees when managers are included in the definition of supervisor. These ratios must not be used strictly to assess the number of employees per supervisor, since blue-collar supervisors supervise white-collar employees and vice versa; and both blue- and white-collar employees may be supervised by a member of the military. Although these ratios do

not reveal major blue- and white-collar differences in the number of subordinates for each supervisor, some blue-collar first-line supervisors we interviewed reported they had over 30 subordinates.

Table 2 shows that of the 15 different grade levels in the WG pay schedule, the largest proportion (27 percent) are concentrated at the relatively high WG-10 level. This is the journey-level grade for many of the skilled trades and crafts and, depending on the wage area, compensation at this level is roughly comparable to that of a white-collar employee at the early steps of the GS-9 grade level.²⁰ Many of the higher graded blue-collar employees work in the defense agencies.

As table 3 shows, most (56 percent) of the Government's blue-collar employees are also at the top step within their grade. This, and the large number of blue-collar employees who are already at a relatively high grade, suggests that many blue-collar employees may be in occupations and positions with little room or expectation for advancement.

Figure 1. Distribution of Blue-Collar Employees by Agencies



Note: "All Others" includes 9% for VA, 3% for Interior, and 1% for GSA.
Source: OPM, Central Personnel Data File, March 16, 1992.

¹⁸ Ibid., p. 8.

¹⁹ See p. 147 of the source in footnote 10.

²⁰ It is important to note that this comparison is based solely on pay and that it does not in any way imply any similarities in either the level or complexity of the work.

²¹ See p. 12 of the source in footnote 1.

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Table 4. Blue-Collar Federal Employment, by Large Executive Branch Agencies, 1991

Agency or Department	Number Blue-Collar	Number White-Collar	Total	Percent Blue Collar	
				of Agency	of Gvnt
Department of the Navy	100,597	201,308	301,905	33	29
Department of the Army	80,058	248,699	328,757	24	23
Department of the Air Force	75,279	137,506	212,785	35	22
Other Defense	13,417	90,314	103,731	13	4
Department of Veterans Affairs	32,118	179,640	211,758	15	9
Department of the Interior	11,476	63,874	75,350	15	3
General Services Administration	5,094	15,278	20,372	25	1
Department of the Treasury	4,128	160,179	164,307	3	1
Dept. of Health and Human Services	3,706	114,111	117,817	3	1
Department of Transportation	3,553	64,555	68,108	5	1
Department of Justice	3,767	85,222	88,989	4	1
Department of Agriculture	4,761	108,499	113,260	4	1
Department of Energy	1,673	17,115	18,788	9	—
Department of Commerce	1,271	30,556	31,827	4	—
Subtotal	340,898	1,516,856	1,857,754	18	98
All Other Agencies	6,464	176,818	183,282	4	2
GOVERNMENTWIDE TOTAL	347,362	1,693,674	2,041,036	17	100

Note: Agencies with fewer than 1,000 blue-collar employees are not shown. Percents are rounded to the nearest whole percent. A dash (—) indicates that the percent was less than 1 percent.

Source: U.S. Office of Personnel Management, Central Personnel Data File, September 1991, "User Inquiry Summary," March 16, 1992.

Where Blue-Collar Employees Work

Figure 1 shows that the DOD agencies employ over three-fourths (269,351 or 78 percent) of the Government's blue-collar employees, with Navy being the largest employer with 100,597 employees. Within the major defense departments, blue-collar employees may comprise up to about one-third of the workforce, as shown in table 4. At individual

installations, the percentages of blue-collar employees are often substantially higher. For example, at the Norfolk Naval Shipyard in Virginia, about 9,000 (75 percent) of the nearly 12,000 employees were blue-collar employees in 1991.

Although some blue-collar employees travel to respond to requests for their expertise worldwide, most defense agency blue-collar employees, particu-

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larly those in the industrial and commercial activities, work at Navy shipyards, aircraft rework facilities, Army depots and arsenals, defense logistics centers, and Air Force bases. While some facilities are in remote areas, many facilities are within ready access to population centers with major water, air, rail, or other transportation systems. Even though the Government's defense industries can be found in all 50 States, about one-half of all (blue- and white-collar; Federal and non-Federal) defense-related employment can be found in just eight States: California, Texas, Virginia, New York, Florida, Pennsylvania, Ohio, and Massachusetts.²¹

The number of blue-collar employees in nondefense agencies is considerably smaller than the number in DOD agencies. Nondefense executive branch agencies with at least 5,000 blue-collar employees include: the Department of Veterans Affairs (32,118), the Department of the Interior (11,476), and the General Services Administration (5,094). For the remaining Federal agencies, the numbers of blue-collar employees generally are less than 5,000 each and typically account for fewer than 5 percent of each agency's workforce.

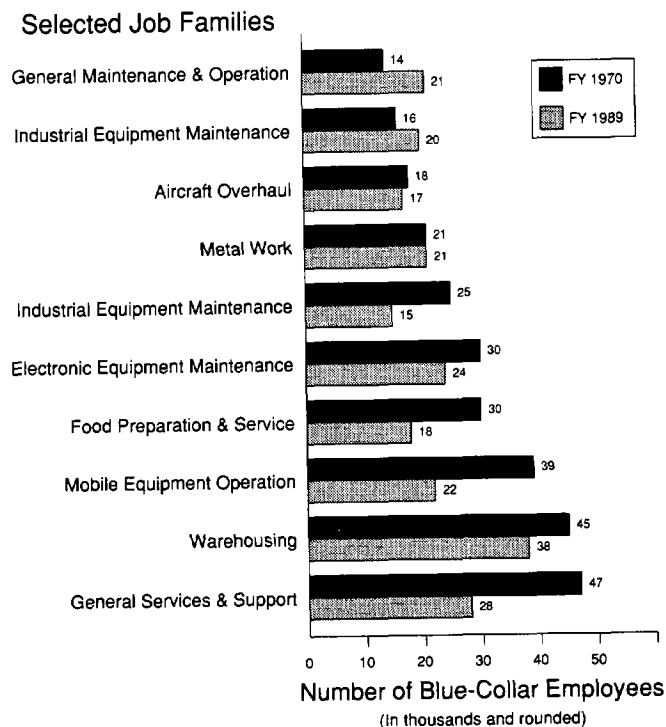
Major Trends in the Numbers and Types of Blue-Collar Employees

Long-term trends in blue-collar employment are best analyzed by first examining the fiscal years 1970-89 trends reported and published by OPM. Table 5 shows that the number of Federal blue-collar employees dropped by nearly one-third (29

percent) over the 20-year period FY 1970 through FY 1989—from 539,000 to 383,000. This decrease can be attributed, in part, to contracting-out, agency reductions, consolidations of functions, centralization, changes in mission, automation, and technological changes in the work itself. During this same time, the percentage of the Federal workforce that was blue-collar decreased from about 28 percent to 18 percent. For some agencies, the changes were much greater. In Navy, for example, the number of blue-collar employees decreased by 43 percent, dropping from 51 percent to 34 percent of the Navy's civilian workforce.

Figure 2 illustrates that the decrease in blue-collar employment was not uniform. While most occupational groupings declined over the 1970-89 time period, *General Maintenance and Operations* and

Figure 2. Trends in Number of Blue-Collar Employees in Selected Job Families: FY 1970 - FY1989



Source: OPM, Federal Workforce Statistics, 1990.

²² U.S. General Accounting Office,

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Table 5. Trends in Federal Blue-Collar Employment, FY 1970-FY 1989

Major Job Families	FY 1970	FY 1989	Number Change	Percent Change
TOTAL	538,502	382,632	-155,870	-29
General Maintenance and Operation	14,334	20,950	+6,616	+46
Industrial Equipment Maintenance	15,836	19,979	+4,143	+26
Metal Work	21,188	20,929	-259	-1
Armament Work	6,491	5,724	-767	-12
Packing and Processing	8,495	7,016	-1,479	-17
Aircraft Overhaul	18,473	16,546	-1,927	-10
Painting and Paperhanging	10,985	8,541	-2,444	-22
Metal Processing	11,160	8,436	-2,724	-24
Engine Overhaul	8,155	5,417	-2,738	-34
Instrument Work	7,708	4,770	-2,938	-38
Plumbing and Pipefitting	15,858	12,603	-3,255	-21
Transportation/Mobile Equipment Maintenance	26,120	22,473	-3,647	-14
Electronic Equipment Installation and Maintenance	29,898	23,653	-6,245	-21
Warehousing and Stock Handling	45,103	37,513	-7,590	-17
Electrical Installation and Maintenance	28,567	20,789	-7,778	-27
Printing	13,689	5,825	-7,864	-57
Machine Tool Work	21,607	13,040	-8,567	-40
Industrial Equipment Operation	24,624	15,309	-9,315	-38
Woodwork	17,755	8,255	-9,500	-53
Food Preparation and Serving	29,703	18,012	-11,691	-39
Transportation/Mobile Equipment Operation	38,636	22,268	-16,368	-42
General Services and Support Work	47,166	28,155	-19,011	-40
All Others	76,951	36,429	-40,622	-53

Adapted from: U.S. Office of Personnel Management, "Federal Civilian Workforce Statistics: Occupations of Federal White-Collar and Blue-Collar Workers, Sep. 30, 1989," Washington, DC, 1990, p. 146.

Industrial Equipment Maintenance increased by 46 and 26 percent, respectively. The growth in these general occupational groups can be attributed, in part, to the reclassification of some blue-collar employees into these occupations when more specialized one-of-a-kind occupations were elimi-

nated. Generally, occupational groups with lower graded jobs were the ones that sustained the largest decreases. Many of these lower graded jobs were abolished or contracted out during this time period. Today, most occupations amenable for contracting-out have been largely contracted out and legislation

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Table 6. Trends in Populous Blue-Collar Occupations, FY 1987-FY 1991

Occupation	Fiscal Year			Percent Change		Number Change
	1987	1989	1991	'87-'89	'89-'91	'87-'89
Laboring	12,933	10,705	7,800	-17	-27	-5,133
Pipefitting	11,430	10,424	7,900	-9	-24	-3,520
Electronics Mechanic	16,724	15,261	13,710	-9	-10	-3,014
Electrician	12,140	10,051	9,620	-17	-4	-2,520
Custodial Working	17,519	16,067	15,035	-8	-6	-2,484
Machining	10,032	9,304	7,836	-7	-16	-2,196
Food Service Worker	12,351	11,104	10,433	-10	-6	-1,918
Materials Handler	24,896	23,532	22,985	-5	-2	-1,911
Motor Vehicle Operator	11,965	11,104	10,275	-7	-7	-1,690
Sheetmetal Mechanic	12,241	12,088	10,813	-1	-11	-1,428
Heavy Mobile Equipment Mechanic	13,070	12,966	11,994	-1	-7	-1,076
Aircraft Mechanic	15,601	15,342	14,820	-2	-3	-781
Maintenance Mechanic	11,647	12,247	12,792	-5	+4	+1,145

Adapted from: U.S. Office of Personnel Management, "Federal Civilian Workforce Statistics: Occupations of Federal White-Collar and Blue-Collar Workers, Sep. 30, 1989," Washington, DC, 1990; and U.S. Office of Personnel Management, Central Personnel Data File, September 1991, "User Inquiry Summary," Mar. 16, 1992.

has greatly reduced the potential for any future contracting out.²²

It is of interest to focus on how the number of positions in some of the most populous blue-collar occupations has changed since FY 1987, and particularly in the 2 years since FY 1989, when the defense cutbacks first started. Table 6 shows that while lower graded positions (e.g., laborer and custodial work) continued to decline in great numbers, as they had over the 1970-89 timeframe, some higher graded jobs began in FY 1989-91 to show the effects of the defense industry downsizing and reorganization. For example, pipefitters (journey-level grade WG-10), who install, repair, and

maintain high-pressure piping systems such as steam heating, steam power (e.g., on ships), and hydraulic and high-pressure air and oil line systems, lost 24 percent of their positions over the 2 years, dropping from 10,424 to 7,900 positions.

Table 7 shows that Governmentwide the number of blue-collar employees *decreased* by 7 percent over fiscal years 1989-91, while white-collar employment *increased* by 3 percent. Also shown are the rates at which the six agencies in this study have changed their numbers of blue- and white-collar employees. Generally, the number of blue-collar employees decreased at a greater rate than the number of white-collar employees, and, as expected, the

²² U.S. General Accounting Office, "OMB Circular A-76: Legislation has Curbed Many Cost Studies in the Military Services," GAO/ GGD-91-100, Washington, DC, July 1991, p. 3.

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largest losses were in the major defense agencies. Together, Army, Navy, and Air Force decreased the number of blue-collar jobs by over 27,000 during FY 1989-FY 1991. Some of these jobs were reassigned to "other defense agencies" (primarily the Defense Logistics Agency), a step that increased the total number of blue-collar employees in these other agencies by 40 percent. However, because the other defense agencies are relatively small, the 40-percent increase there represents fewer than 4,000 employees, far short of the 27,000 blue-collar positions lost in the three large armed services departments.

While the overall magnitude of these cutbacks generally has been within the range of what can be managed through DOD hiring restrictions and normal attrition, these management tools alone may not be sufficient to meet the ongoing and projected cuts in defense programs and personnel, and increased separations through reduction-in-force procedures may become necessary.

Rates of Blue-Collar Turnover

Knowledge about employee turnover is essential in

managing an organization's workforce and in workforce planning, particularly when an organization needs to reduce the number of its employees and intends to accomplish this primarily through hiring restrictions and natural attrition. For example, if the organization's turnover rates closely match the desired rate of personnel reductions, it may be able to avoid involuntary separations. If not, it may have to use alternative reduction strategies.

Knowledge about turnover is also important because recruiting employees to replace those who leave is costly and can significantly affect an agency's personnel costs. Excessive turnover, particularly of valued employees, also may be an important indicator that the organization's compensation practices are no longer competitive or that working conditions are more attractive elsewhere.

Because a large percentage of Federal blue-collar employees are likely to be affected by future DOD cutbacks, knowledge about typical blue-collar rates of turnover and their variations should be increasingly useful. Table 8 compares the Governmentwide turnover rates (percent of separations from the

Table 7. Federal Blue-Collar Employment Changes, by Selected Agencies, FY 1989-FY 1991

Agency or Department	Percent Change		
	Blue-Collar	White-Collar	Total
GOVERNMENTWIDE TOTAL	-7	+3	+1
Department of the Navy	-11	-5	-7
Department of the Army	-9	-6	-6
Department of the Air Force	-10	-11	-10
Other Defense ¹	+40	+15	+18
Department of Veterans Affairs	-2	+5	+3
Department of Interior	+5	+6	+5
General Services Administration	-5	+9	+5

¹ Because the "Other Defense" agencies are relatively small, the large percentage increases represent relatively small numbers of employees. For example, the 40 percent increase in blue-collar employees refers to a gain of just 4,000 employees in these defense agencies.

Adapted from: U.S. Office of Personnel Management, "Federal Civilian Workforce Statistics: Occupations of Federal White-Collar and Blue-Collar Workers, Sep. 30, 1989," Washington, DC, 1990; and U.S. Office of Personnel Management, Central Personnel Data File, September 1991, "User Inquiry Summary," Mar. 16, 1992.

Note: Agencies selected were the agencies in the study plus "Other Defense." Percents are rounded to the nearest whole percent.

Federal Blue-Collar Work and Workers

Table 8. Turnover Rates for Federal Blue- and White-Collar Employees, FY 1982-FY 1991

Item	Fiscal Year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Separations										
GS	8.1	7.7	8.0	8.5	8.8	8.4	8.8	8.0	7.5	6.5
WG	7.3	7.2	7.2	7.6	7.8	7.6	8.5	7.2	6.8	7.4
Resignations (quits)										
GS	4.7	4.4	4.9	5.1	5.2	4.9	5.1	4.9	4.5	3.5
WG	2.2	2.1	2.5	2.7	2.5	2.4	2.5	2.6	2.4	1.8
Retirements										
GS	2.3	2.5	2.4	2.5	2.8	2.4	2.8	2.2	2.2	2.2
WG	3.8	3.9	3.6	3.7	3.9	3.7	4.6	3.3	2.9	3.2
Discharges										
GS	NA	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.4
WG	NA	0.4	0.5	0.5	0.6	0.5	0.6	0.6	0.7	0.6
Reductions in Force										
GS	NA	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1
WG	NA	0.2	0.2	0.2	0.1	0.4	0.3	0.1	0.2	1.3

Source: U.S. Office of Personnel Management, Central Personnel Data File, "Accession/Separation Rates: FY 1982-FY 1991," undated turnover report prepared for the Office of Management and Budget. "NA" means these data elements were not available in FY 1982.

Government) for Federal blue- and white-collar employees from FY 1982 through FY 1991. The data show that Governmentwide separation rates are generally rather low and that the separation rates for blue-collar employees are slightly but consistently lower than those for white-collar employees except in FY 1991, when relatively large numbers of blue-collar employees were involuntarily separated from their jobs through reductions in force.

The only slightly differing overall rates of blue- and white-collar turnover mask some important differ-

ences in *how* employees in these two groups separate from the Federal workforce. For example, as is shown in table 8, while the total separation rates are fairly similar and relatively low for both groups, blue-collar employees resigned (quit) at about half the rate of white-collar employees, and they retired at a rate that was about 50 percent greater than the white-collar retirement rate.²³ Thus, while their total turnover rates are not markedly different, blue-collar turnover rates contain a larger percentage of retirements and a smaller percentage of resigna-

²³ The higher retirement rate for blue-collar employees does not simply reflect an older workforce, since table 1 showed that the age of the blue-collar workforce was only slightly higher (43.8 vs. 42.4 years) than that of the white-collar workforce.

Federal Blue-Collar Work and Workers

tions. Since concerns about possible changes in retirement policies have been identified as a major reason why Federal employees retire when they do,²⁴ the relatively higher retirement rate for blue-collar employees may cause changes in retirement policies or early retirement options to have different effects on blue-collar than white-collar workers.

Data obtained from OPM show that separation rate differences between blue- and white-collar employees are particularly pronounced among supervisors. During 1987, while white-collar supervisors separated at a 5-percent rate, blue-collar supervisors separated at a 10-percent rate. The differences for retirements are especially noticeable. While 7 percent of the blue-collar supervisors separated by retiring, only 2 percent of the white-collar supervisors retired. Again, managers implementing any so-called "early out incentives" should consider the differential impact these incentives might have on blue- and white-collar supervisors. The early out incentives might be relatively more attractive for blue-collar supervisors and they may leave in greater numbers than desired.

Like white-collar turnover, blue-collar turnover varies by occupation, length of service, and location. For example, among the most populous blue-collar occupations, the relatively higher turnover rates were for Food Service Workers (14 percent) and Custodians (12 percent), two of the lower paying blue-collar occupations. The relatively lower turnover rates were for the more highly graded occupations, such as Mechanics (6 percent).

In another example, the FY 1990 2.4-percent quit (resignation) rate ranged from 6 percent for blue-collar employees with fewer than 5 years of service to just .5 percent for employees with 20 or more years of service.²⁵ Consequently, organizations with large numbers of blue-collar employees with little length of service or in low-paying occupations

generally may expect to have relatively higher rates of turnover than organizations with large numbers of blue-collar employees with long tenure or in high-paying jobs.

A third example shows how the turnover rate varies by location. Focusing only on the rates of resignations (quits), we find the following FY 1989 quit rates in some selected large blue-collar wage areas: 9.2 percent in Boston, 5.5 percent in New York, 3.4 percent in Philadelphia, and 2.6 percent in Norfolk-Portsmouth.

The turnover statistics analyzed above demonstrate that blue-collar employees, like their white-collar counterparts, are a very stable workforce. However, compared to their white-collar coworkers, blue-collar employees are *less likely* to leave the Government by resigning and *more likely* to leave by retiring. As with white-collar employees, the relatively low separation rates of blue-collar employees, particularly in some locations, among some subgroups, and for certain occupations, suggest that reliance on normal turnover or attrition alone may not always be sufficient to meet the personnel reduction needs faced by many Federal managers, particularly those in DOD.

In addition, the availability of outside employment, possible changes in retirement policies, the age of the workforce, and other factors can substantially affect attrition rates. While some of these factors may have contributed to the relatively high rate of separations in FY 1988, especially in retirements of blue-collar employees, cutbacks in defense spending were likely to be a major contributing factor to the drop in quit rates from FY 1990 to FY 1991. Table 8 shows that the white-collar quit rate dropped over 20 percent from FY 1990 to FY 1991, going from 4.5 percent to 3.5 percent, while the blue-collar quit rate dropped from 2.4 percent to 1.8 percent during the same time period—to its lowest level in 10 years.²⁶

²⁴ U.S. Merit Systems Protection Board, "Why Are Employees Leaving the Federal Government? Results of an Exit Survey," Washington, D.C., May 1990, p. 24.

²⁵ CPDF, "Quit Rates of Full-Time Permanent Employees by Federal Wage System Area, by Length of Service Grouping, Fiscal Year 1989," data run of Nov. 13, 1990.

²⁶ CPDF, "Accession/Separation Rates: FY 1982 - FY 1991," undated turnover report prepared for OMB.

Comparison of Blue- and White-Collar Personnel Management Systems

Although there are many similarities between the Government's blue- and white-collar employees, there are several important differences in the ways they are managed. Table 9 compares some of the major blue- and white-collar personnel management systems, regulations, and functions. There are no doubt others, and the comparisons shown are highly simplified. Nevertheless, they show the nature and scope of the differences between, and similarities in, the systems that apply to the majority of blue- and white-collar employees.

As summarized in table 9, except for pay and classification, few other personnel functions or regulations are notably different for blue- and white-collar employees. Two differences that did surface during the course of the study were the restrictions on compensatory time for blue-collar employees and the absence of any Quality Step Increase incentive award for blue-collar workers.

Also, unlike white-collar employees, blue-collar employees do not have required "waiting periods" (52 weeks) in a lower level position before becoming eligible to compete for promotions to the next-higher position. Blue-collar employees at *any* grade can compete for and, if qualified, be selected for *any* higher level position, without a "time-in-grade" requirement. Although such rapid advance is rare, it can present organizational difficulties. In at least some situations, the most productive workers

advanced into higher paying production-facilitating and supervisory positions as soon as they reached the journey-level grade. While these individuals nevertheless continued to serve the organization, their rapid advance sometimes left critical shortages in the number of qualified journey-level employees to do the production work.

Although many of the personnel management systems are similar or identical for the two employee groups, in practice, there may be considerable variations. For example, similarities of training regulations should not be interpreted to imply that the quantity, quality, and availability of training are necessarily similar in actual practice, or even that they should be. Also, even though compensatory time may be permissible—if authorized—for white-collar employees, many local installations in actual practice do not authorize it.

Early History

In the beginnings of the Federal Civil Service, job positions and salaries were individually determined by agency heads, resulting in significant disparities in the ways jobs were classified and compensated.²⁷ This was no less true for blue- than for white-collar employees, but even then blue- and white-collar employees were considered separate groups of employees. The nature of their work was distinct.

²⁷ Unless otherwise indicated, large portions of this section on the history of Civil Service classification are adapted from Jay M. Shafritz, Norma M. Riccucci, David H. Rosenbloom, and Albert C. Hyde, "Personnel Management in Government: Politics and Process," (4th ed.), Marcel Dekker, Inc., New York, NY, 1992, pp. 131-166.

Comparison of Personnel Management Systems

Table 9. Comparison of Federal Blue- and White-Collar Personnel Management Systems (as of August 1992)

Systems/Procedures	Blue-Collar (WG)	White-Collar (GS)
<i>Primary Pay System Aspects</i>		
Pay basis (pre-FEPCA)	Comparability with prevailing rate in private sector in 135 local wage areas	Comparability with prevailing rate in private sector nationwide
Coverage of pay schedule	Whole wage area (survey and non-survey area)	Survey area only (nationwide)
Comparability level setting:	100 percent at step 2	100 percent at average rate
Comparability subject to alternative pay plan(s)	No, see next item	Yes
Comparability subject to pay cap	Yes, same as GS cap	Yes, beginning in FY 1979
Effective time of pay adjustments	Yearly, varies by wage area and survey timetable	Yearly, same date for everyone
Pay basis (post-FEPCA)	Same as pre-FEPCA	Comparability with prevailing rate in 33 areas (proposed) in non-Federal sector
Comparability level	Same as pre-FEPCA	Min. 95 percent of ave. rate
Effective time of pay adjustments	Varies by wage area and survey timetable	Phase-in, starting January 1994
Comparability subject to alternative pay plan	No, see next item	Yes
Comparability subject to pay cap	Yes, same as GS cap	Yes, beginning in FY 1979
Annual ECI-based pay adjustments	No	Yes, beginning Jan 1991
<i>Other Pay Aspects</i>		
Interim geographic pay adjustments	No	Yes, 8% in NY, SF, and LA
Number of pay steps in each grade	5	10
Normal time to top step in each grade	6 years	18 years
Pay difference between steps	4 percent of step 2	3-1/3 percent of step 1
Pay difference between hi/lo step	17 percent	30 percent
Pre-FEPCA Pay gap (approximately)	10 percent	30 percent
Compensatory Time	No, with minor exception	Yes, but only if authorized

Notes: The comparisons are primarily between management systems, not their operation in practice, and they focus on the nonsupervisory positions of the Federal Wage System (WG) and General Schedule (GS). However, most of the comparisons also apply to supervisory positions. FEPCA refers to the Federal Employees Pay Comparability Act of 1990. FLSA refers to the Fair Labor Standards Act of 1938, amended in 1974 to apply to Federal employees. ECI refers to the Bureau of Labor's Employment Cost Index.

Comparison of Personnel Management Systems

Table 9. Comparison of Federal Blue- and White-Collar Personnel Management Systems (as of August 1992) (cont.)

Systems/Procedures	Blue-Collar (WG)	White-Collar (GS)
<i>Other Pay Aspects (cont.)</i>		
Overtime (1-1/2 times pay rate)	FLSA/title 5 applies	FLSA up to GS-10, step-1
Union involvement in pay setting	Yes, at all levels	Yes, at national level
Employees on special pay rates	Less than 1 percent	About 13 percent
<i>Classification</i>		
Number of occupational series	398 ¹	452
Number of nonsupervisory grade levels	15	15
Typical number grade levels per occupation	2-4	4-8
Time of major standardizations	1968, 1972	1923, 1949
Classification appeals	Must appeal to agency first	Can appeal directly to OPM
<i>Performance Management</i>		
Performance Appraisal	Same as GS	Same as WG
Incentive Awards:		
Quality Step Increase	No	Yes
Superior Performance	Yes	Yes
Special Act or Service	Yes	Yes
<i>Promotion</i>		
Minimum amount of pay increase	4% of step 2 rate	2 steps
Time in grade required for eligibility	None	52 weeks (GS-5 and up)
<i>Recruiting/Examining Procedures</i>		
	OPM examines, some delegation to agencies, no nationwide direct hiring	OPM examines but much delegation to agencies, and many direct hires.
<i>Grievance/Appeal Procedures</i>		
	Same as GS	Same as WG
<i>RIF Procedures</i>		
	Same as GS	Same as WG
<i>Benefits (e.g., retirement, health, leave)</i>		
	Same as GS	Same as WG
<i>Training</i>		
	Same as GS	Same as WG

¹ As of September 30, 1988, there were 398 occupational series. As of March 1990, the Office of Personnel Management had decreased the number to 303, and further decreases are expected as occupations continue to be abolished or consolidated into other occupational series.

Comparison of Personnel Management Systems

Blue-collar work tended to be more physical and workloads tended to be more variable and seasonal, and from its inception blue-collar work was closely aligned with labor organizations and private sector trades and crafts. Blue-collar employees typically were paid by the hour, and as early as 1861, Congress provided "that the hours of labor and the rates of wages * * * shall conform as nearly as is consistent with the public interest with those of the private establishments." In addition, the early legislation recognized the close ties of blue-collar workers with organized labor and it provided for extensive labor-management systems in the process for determining prevailing rates.

The early blue-collar pay and classification systems led to considerable differences in the compensation of employees doing basically the same work in the same geographic area. Inequities were not uncommon: "A janitor in one agency in a geographic area could have been paid \$3.40 while a janitor just across town but in a different agency, performing the same work, could have gotten \$2.70."²⁸ The large inequities that sometimes resulted from these early systems and the concomitant problems of inefficiency, low morale, ineffective organizational structures, and excessive employee turnover argued for increased standardization.

In a formal effort towards greater pay equity, the Classification Act of 1923 established some basic principles for standardizing jobs, grade levels, and pay. Although the act applied to only about 10 percent²⁹ of the Federal service, it nevertheless established the principles that *positions* and *not individuals* be classified and that there should be *equal pay for equal work*. However, because most jobs were not covered, there continued to be great variation among jobs and pay-setting practices.

To further reduce the continuing variations and inequities, the Classification Act of 1949 established

a single salary schedule, the General Schedule, and defined 18 grade levels to cover virtually all of the white-collar jobs. The Classification Act specifically recognized the distinction between blue- and white-collar jobs and *excluded* blue-collar employees from its provisions. Consequently, the variability in blue-collar classification and pay practices continued.

Establishment of the Federal Wage System in 1972

It was not until 1966, when a Presidential memorandum ordered the U.S. Civil Service Commission to develop a coordinated wage system for blue-collar employees, that a serious effort was begun to standardize conditions across agencies for the Government's blue-collar workforce. After extensive negotiations among the Federal agencies and unions, existing blue-collar "prevailing rate" systems were replaced by the Coordinated Federal Wage System in 1968. With minor differences, this system was enacted into law (Public Law 92-392) as the Federal Wage System—FWS—in 1972.³⁰

The FWS subscribed to four basic principles for blue-collar work:

- ❑ Comparability with prevailing levels of pay in the local area;
- ❑ Equal pay for equal work;
- ❑ Pay differentials for different levels of work; and
- ❑ Maintenance of pay levels to attract and retain qualified employees.³¹

Within this statutory framework and in close cooperation with employee unions at all levels, OPM established a wage system (FWS) with the following major features:

- ❑ Specification of the local wage areas (currently there are 135—mostly divided along county lines);

²⁸ U.S. Office of Personnel Management, FED FACTS 7, "The Federal Wage System," 0-322-569, Washington, DC, June 1980, p. 2.

²⁹ Paul P. Van Riper, "History of the United States Civil Service," Row, Peterson and Company, Evanston, IL, 1958, p. 299.

³⁰ Although the Federal Wage System regulations also cover blue-collar employees working in nonappropriated fund activities, these latter employees are not in the U.S. Civil Service and are not included in this report.

³¹ 5 U.S.C. 5341-5349, U.S. Government Printing Office, Washington, DC, September 1991.

Comparison of Personnel Management Systems

- ❑ Definition of the industries and blue-collar jobs to be surveyed for pay rates;
- ❑ Designation of the lead agencies and unions to conduct the pay surveys in each wage area;
- ❑ A time table of the wage surveys to be conducted;
- ❑ A system for collecting wage rate information from private sector establishments, using survey teams of one management and one union representative;
- ❑ A system for computing pay rates for blue-collar employees in the wage area; and
- ❑ A system for grading jobs and differences between levels of work.

Comparison of Blue- and White-Collar Pay Systems

As shown in table 9, prior to the Federal Employees Pay Comparability Act of 1990 (FEPCA), the system for setting blue-collar pay had been markedly different from that for setting white-collar pay. Until the provisions of FEPCA are fully implemented some significant differences will remain. Prior to the FEPCA changes, General Schedule white-collar employees at the same grade level generally received the same basic rate of pay, nationwide.

Legislation in 1962 had already linked white-collar pay to that of private sector employees performing similar work, but unlike blue-collar pay comparability, the comparisons were made on a nationwide rather than a local wage area basis. In addition, subsequent white-collar pay legislation permitted the President to submit an "alternative pay plan" if "the President should, in any year, consider it inappropriate to make the pay adjustment required."³²

Pay Gaps and Pay Caps

As a result of this latter legislation and beginning in 1978, the President has requested and Congress has generally approved limiting white-collar pay raises below the levels recommended by the comparability surveys. Consequently, the pay gap between Federal white-collar employees and their private

sector counterparts has gradually increased, approaching an overall average gap of 30 percent in 1990.³³

Despite the statutory basis for setting blue-collar pay to the prevailing local rate, blue-collar pay also has not kept pace with local prevailing rates. Since 1978, successive administrations have limited or capped blue-collar pay increases at the same percentages as those allowed for GS employees. As a result of these caps, the *average* blue-collar pay rate in early 1992 was about 9.6 percent less than the prevailing private sector rate.³⁴

Even though the average pay gap is considerably less for blue-collar than for white-collar employees, its magnitude varies by grade level (from 0 to 41 percent) and geographic area (0 to 32 percent). In 1991, for example, the Richmond, VA, wage area (2,580 blue-collar employees) had the largest pay gap with the private sector, about 27 percent. Philadelphia (over 11,000 employees) had a gap of 17 percent, and Seattle-Everett-Takoma (nearly 13,000 employees) had a gap of 13 percent. Other wage areas, such as Jacksonville (4,159 employees), El Paso (2,444 employees), and Charleston (7,122 employees), had gaps of about 1 percent or less, while Macon, GA (6,767 employees), had a gap of about 4 percent. While there are other factors to consider, large pay gaps may be expected to have a

³² 5 U.S.C. 5303(b)(1), U.S. Government Printing Office, September 1991, p. 276.

³³ Advisory Committee on Federal Pay, "Read Their Lips: Pay Reform Now!" Washington, DC, July 1990, p. 3.

³⁴ U.S. Office of Personnel Management, "Federal Wage System," briefing slides of March 1992.

Comparison of Blue- and White-Collar Pay Systems

Table 10. Federal Blue-Collar Quit Rates, by Selected Large Wage Areas

Wage Area	Quit Rate (Percent)	No. of WG Employees in Wage Area	Average Pay Gap (Percent)
Boston, MA	9.2	2,574	20
New York, NY	5.5	4,993	10
Los Angeles, CA	4.7	8,427	9
Portsmouth, NH	4.1	5,086	13
Philadelphia, PA	3.4	10,930	17
Baltimore, MD	3.2	4,294	5
Jacksonville, FL	2.8	3,958	—
Norfolk-Portsmouth, VA	2.7	16,567	9
San Diego, CA	2.6	7,436	9
Washington, DC	2.6	13,752	10
San Francisco, CA	2.4	14,072	9
Columbus, GA	2.0	3,001	4
Oklahoma City, OK	1.9	8,965	7
San Antonio, TX	1.9	11,314	8
Seattle-Everett-Tacoma, WA	1.9	12,305	13
Charleston, SC	1.8	7,638	1
Louisville, KY	1.5	3,246	13
Macon, GA	1.5	6,595	4
Harrisburg, PA	1.4	3,787	9
Hawaii	1.4	7,637	4
Utah	1.4	9,922	6
Texarkana, TX and AR	1.3	3,382	15
Anniston-Gadsen, AL	1.1	3,503	10
Corpus Christi, TX	1.0	3,503	15
Pensacola, FL	0.8	4,490	10
Governmentwide Average	2.4		9.8

Adapted from: U.S. Office of Personnel Management, "Federal Wage System Appropriated Fund Employee Counts and Pay Lags—Regular Schedules Only," February 19, 1991; and U.S. Office of Personnel Management, Central Personnel Data File, "Quit Rates of Full-Time Permanent Employees by Federal Wage System Area, by Length of Service Grouping, Fiscal Year 1989," November 13, 1990.

Note: Wage areas selected are ones with at least 2,000 blue-collar employees. The pay gap in Jacksonville, FL, was less than 1 percent (—).

negative effect on the Government's ability to attract and retain qualified blue-collar employees in some areas. Shortages of qualified applicants are already being experienced for some occupations in some areas.

Table 10 shows that there is not a direct correspondence between the quit rate and the pay gap and that other factors—e.g., job opportunities—also must be considered in an interpretation of the quit rate. Also, the magnitude of the quit rate does not necessarily reflect the number of employees who quit in any single geographic area. The number of employees who quit may be quite large, even though the quit rate for the area may be quite low. This is because geographic areas differ greatly in their number of blue-collar employees. Of the 135 wage areas, just 15 include more than 5,000 wage grade employees while 49 include fewer than 1,000 employees.

Nevertheless, the relatively high quit rate in some locations suggests that some areas may be beginning to experience difficulties in retaining blue-collar employees. In addition, many of the managers and blue-collar supervisors we interviewed at the blue-collar installations reported recruiting and retention difficulties for some occupations.

Pay Steps and Step Progression

Besides differing with respect to how comparability is determined, the blue- and white-collar systems differ in the point at which Federal pay is matched to private sector pay. This is perhaps the most important difference. Briefly, for white-collar

Comparison of Blue- and White-Collar Pay Systems

Table 11. Percent of Federal Blue-Collar Employees at Each Pay Step, Market Pay Rate Percentages, And Time Progressions

Pay Step	Percent of Employees	Percent of Market Rate	Time to Progress to Next Step ¹
1	7	96	6 months
2	12	100	18 months
3	14	104	24 months
4	12	108	24 months
5	56	112	

¹ "Time to progress" to the next pay step is automatic and is based solely on length of service (given satisfactory performance). The white-collar "time in grade" requirement is a necessary but not the only factor required for promotion.

Notes: Percents do not add to 100 because of rounding. The average step is 3.99.

Source: U.S. Office of Personnel Management, "Federal Wage System," briefing slides of March 1992.

employees, FEPCA sets pay so that Federal employees would be paid approximately the same rate as the average pay rate for non-Federal employees performing the same types and levels of work in the same area.³⁵

In contrast, blue-collar pay comparability was set by Public Law 92-392 to equate the average market rate of pay to the second step (the "pay line") of the five steps in each wage grade. Thus, only employees at step 2 would be paid an amount equal to that in the private sector. This creates an important difference with white-collar pay comparability because, as is shown in table 11, over half (56 percent) of the blue-collar employees have already reached step 5—the top step in their grade level. At this step, Public Law 92-392 has set the blue-collar pay rate at 112

percent of the rate at step 2, or 12 percent above the average market rate.

The pay (in percent of market rate) for each step, as well as the time required to progress automatically from one step to the next higher step, was statutorily set by Public Law 92-392 in 1972. As shown in table 11, blue-collar employees who perform satisfactorily can progress to step 5 in as little as 6 years. At that step, even with the average nationwide pay gap of 9.6 percent (in early 1992), step 5 blue-collar employees—on average—would still be earning wages above the market rate. If the industry average pay were matched at the average FWS step, which is about step 4 (3.99), the 9.6 percent blue-collar pay gap would be just 1.4 percent.

Thus, the matching of market pay to the second of the five wage grade steps rather than to the average step remains one of the most significant

differences between the two pay systems and substantially reduces the real magnitude of the pay gap for the blue-collar employees. However, as reported earlier, these gaps are *average* gaps, which is to recognize that the gaps may be much greater or smaller in some areas, for some occupations, and in some grade levels.

Other Pay System Differences

Beginning in 1994, the white-collar pay comparability system is expected to become more like the blue-collar locality-based system. However, instead of setting pay to the rates prevailing in 135 different wage areas, OPM in cooperation with national unions is tentatively proposing a system to base white-collar pay on wage surveys (conducted by the

³⁵ FEPCA specifies that the Federal/non-Federal pay disparity be at least 5 percent before comparability adjustments are required. For pay comparability purposes, proposed survey areas are usually the geographic areas in and around major metropolitan statistical areas, although one survey area may include all of the remaining part of the continental United States.

Comparison of Blue- and White-Collar Pay Systems

Bureau of Labor Statistics) in 32 large metropolitan areas and in an additional 33rd area encompassing the remainder of the country. FEPCA also authorized white-collar employees to receive interim annual pay adjustments based on the Employment Cost Index (ECI), starting in January of 1991. However, both the ECI-based pay adjustments and the comparability adjustments continue to remain subject to alternative Presidential pay plans and administrative pay caps.

Another difference between blue- and white-collar pay-setting systems is related to the types of non-Federal employers included in the pay comparability surveys. Both the blue-collar and the pre-FEPCA white-collar pay systems surveyed *private sector* employers to determine prevailing rates of pay. Neither of these surveys included State and local governments, which typically have many employees doing work similar to that of Federal employees. FEPCA has extended the coverage of its white-collar pay comparability surveys from the private sector to the broader *non-Federal* sector, which includes State and local governments. The blue-collar pay-setting system, however, continues to *exclude* these public organizations, even though they employ significant numbers of blue-collar employees.

Pay Studies and Change Initiatives

Several studies have addressed blue-collar pay-setting practices and have recommended changes. A 1975 study by GAO included, among other recommendations, calls for repealing the five steps in each grade (multiple steps are relatively rare in the private sector³⁶), setting pay so that average private sector pay is set to average Federal pay, and

broadening of the survey coverage from the private sector to the larger non-Federal sector.³⁷ In 1976, a report of the President's Panel on Federal Compensation (Rockefeller Panel) called for similar improvements,³⁸ and a Congressional Budget Office study in 1980 presented a detailed analysis of the potential cost savings resulting from the implementation of these and various other options.³⁹

On a number of occasions, OPM has submitted legislative proposals to Congress based on variations of these recommendations but with only limited success. Unions have generally resisted the proposed changes to the prevailing rate system, but they have voiced and continue to voice repeated opposition to the continued application of the pay caps to blue-collar employees and strongly support bills, pending in Congress as of July 1992, that would repeal the cap on blue-collar pay.

In response to a request by Congress, OPM in June of 1992 released the results of a study of FWS pay issues.⁴⁰ Highlighting the considerable pay gaps in some wage areas and at some grade levels, OPM found that the 14 years of successive pay limitations have resulted in "substantial pay anomalies" so that on a grade-by-grade basis within wage areas and from one area to another, FWS pay rates are no longer aligned with prevailing levels for comparable work within the area. As on previous occasions, OPM identifies pay caps as a "major source of problems in the FWS," a source of problems that need to be addressed by Congress.

While OPM recommends phasing out the effects of the pay caps over the same 9-year period and with the same "gap closure" percentages as those provided for white-collar employees under FEPCA, OPM believes the removal of the pay caps can only

³⁶ Congressional Budget Office, "Alternative Approaches to Adjusting Compensation for Federal Blue Collar Employees," Washington, DC, November 1980, p. 7.

³⁷ U.S. General Accounting Office, "Improving the Pay Determination Process for Federal Blue-Collar Employees," Washington, DC, June 3, 1975, p. 13.

³⁸ President's Panel on Federal Compensation, "The Federal Wage System," Staff Report of the President's Panel (Rockefeller Pay Study), Washington, DC, January 1976, pp. 107-121.

³⁹ Congressional Budget Office, "Alternative Approaches to Adjusting Compensation for Federal Blue Collar Employees," Washington, DC, November 1980, pp. 47-59.

⁴⁰ U.S. Office of Personnel Management, "Report to Congress on the Federal Wage System: Pay Problems and Pay Cap Phaseout," June 1992.

Comparison of Blue- and White-Collar Pay Systems

be considered in the context of broader pay system reform.⁴¹ Among a number of other proposals, OPM seeks to link removal of the pay cap with changes in the statutes which “perpetuate serious inequities” between the Federal blue- and white-collar pay systems and which result in the Government regularly paying *higher* rates than its competitors for blue-collar work. Specifically, OPM recommends that Congress link prevailing market rates to prevailing FWS rates, rather than to the current fixed link to the step-2 rate.

As the next section will show in more detail, the perceived inequity of the pay caps by blue-collar employees substantially affects the morale of the blue-collar workforce. In addition, large pay gaps in some wage areas and at some grade levels are likely to adversely affect the Government’s ability to attract and retain needed blue-collar employees. Thus, a removal or phaseout of the pay caps can be expected to have a positive effect on the blue-collar workforce. There are also strategic advantages to paralleling the timing and mechanics of the blue-collar caps to those of the FEPCA white-collar pay reform.

Linking the phaseout of blue-collar pay caps to broader FWS pay reform is likely to be more problematic. While reforms to more closely parallel the blue- and white-collar pay systems foster greater equity, any changes in the blue-collar pay system to reduce its relatively generous features are likely to be resisted by the blue-collar workforce and the relevant unions. Blue-collar employees already faced with possible layoffs or other job changes resulting from the DOD downsizing, may be expected to find the proposed changes particularly onerous and may need special considerations.

The issues are complex. However, Federal policymakers need to address them to ensure that the pay gap problems that are now beginning to affect the blue-collar workforce do not worsen. The Board agrees with the OPM recommendation that the blue-collar pay gaps should be phased out, and paralleling the timing and rate of the phaseout to the white-collar pay reform helps align the blue-

and white-collar pay systems. The Board also agrees with OPM that the blue-collar pay-setting system be reformed to pay blue-collar employees *at* the prevailing rate rather than the current *higher* rates. Such reform should strive to more closely align the blue- and white-collar pay-setting practices and provide fair and equitable compensation for all Federal employees.

The Board, however, also recommends that discussions about blue-collar pay reform not be limited to costs alone or even to the desired alignment between the blue- and white-collar pay systems, but that they also include broader issues of blue-collar employment, working conditions, and career advancement. OPM is encouraged to consider the demotivating effects current blue-collar grade and step structures have on the blue-collar workforce. Aligning the blue- and white-collar pay-setting systems does not address the larger career advancement differences between the two groups. For example, particularly problematic is the 5-step grade structure in which blue-collar employees normally reach the top step in their grades in 6 years, while white-collar employees normally progress through the 10 steps of their grades in 18 years.

Views From the Workplace About Blue-Collar Pay

While a knowledge of the history and structure of blue-collar classification and pay setting is important background for decisions affecting blue-collar workers, it is important to supplement this knowledge with the views of blue-collar employees about pay. This section examines some of these views.

Given the relatively small pay gap and the relatively generous blue-collar pay-setting system, it should be no surprise that far fewer (22 percent vs. 45 percent) blue-collar employees than white-collar employees considered pay a *reason to leave* the Government in MSPB’s 1989 Merit Principles Survey. This stance is also reflected in the generally lower quit rate for blue-collar employees, although other factors besides pay, such as possible differences between these two employee groups’ opportunities for alternative employment, also affect quit rates.

⁴¹ Ibid., p. 2.

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On other MPS questions about pay, the differences in attitudes between blue- and white-collar employees were small. Fewer than one-third of the employees in both groups indicated that they were "satisfied with their pay" (30 percent vs. 27 percent, respectively), and only slightly more (38 percent vs. 30 percent) blue-collar than white-collar employees considered pay a *reason to stay* with the Government.

Remove the wage grade pay cap which has been imposed every year since 1978.

Sheetmetal Mechanic, WG-10

Although the results are somewhat tenuous because of our limited sample size, it is of interest that the blue-collar employees who completed the present study's questionnaires during 1991 were more satisfied with pay than the MPS respondents in 1989 (39 percent vs. 30 percent), and the percent of the

blue-collar employees who considered salary a *reason to stay* doubled, from 22 percent in 1989 to 47 percent in 1991. Also, during about this same time period, the blue-collar quit rate dropped, going from 2.4 in FY 1990 to 1.8 percent in FY 1991. All three changes may be related to the national economic climate in 1991 as well as the opportunity by 1991 for the effects of the defense cuts begun in 1989 to have made their impression.

Finally, during our group interviews, pay was one of the first and most frequently mentioned issues. Virtually all of the comments about pay called for a removal of the pay cap. The cap was consistently seen by blue-collar employees, supervisors, and also more than a few white-collar managers as an unfair restriction on the long-standing principle that blue-collar pay be based on prevailing rates.

Union Involvement

It is not possible to discuss the Government's blue-collar workforce without noting its considerable ties with organized labor unions. This is an important difference with the white-collar workforce. Since the very beginnings of the Civil Service, blue-collar workers were organizing. The Lloyd-LaFollete Act of 1912 specifically affirmed the right of Federal employees to join or refrain from joining employee organizations.⁴² Nevertheless, "unions did not move to the forefront of labor relations until the early 1960's when Presidential Executive Order 10988 promulgated a full-scale Federal-wide policy that made dealing with the recognized labor organizations an affirmative obligation of government management."⁴³ This Executive order gave Federal employees the right to form and join unions and "legitimized collective bargaining in the Federal service."⁴⁴

The union's role in blue-collar pay-setting practices was recognized when the FWS legislation of 1972 formally provided for the participation of recognized labor organizations at all levels of the process.⁴⁵ At the national level, it established an 11-member Federal Prevailing Rate Advisory Committee⁴⁶ to advise the director of OPM on the prevailing

rate system; and at the local wage area levels, "lead" unions work closely with "lead" agencies in planning and conducting the wage surveys. The labor rights of covered Federal workers were ultimately recognized and guaranteed by Title VII of the Civil Service Reform Act of 1978.⁴⁷

Provide a framework which encourages improved labor management relations rather than the present adversarial relationship caused by the present statute.

Sheet Metal Mechanic, WG-10

The increasing recognition of the role of unions resulted in a significant increase in the level of representation among all Federal workers, but particularly among the more unionized blue-collar workforce. In 1966, 40 percent of blue-collar employees were already covered by exclusive bargaining agreements, versus 15 percent of white-collar

⁴² U.S. Civil Service Commission, "Biography of an Ideal: A History of the Federal Civil Service," Washington, DC, 1973, p. 94.

⁴³ Ibid., p. 117.

⁴⁴ Jay M. Shafritz et al., op. cit., p. 342.

⁴⁵ 5 U.S.C. 5343(c)(2), U.S. Government Printing Office, Washington, DC, September 1991, p. 317

⁴⁶ Ibid., sec. 5347, pp. 320-322.

⁴⁷ Jay M. Shafritz et al., op. cit., p. 337.

Union Involvement

employees. At the time of the Civil Service Reform Act of 1978, these coverages had increased to 85 and 55 percent, respectively. According to the most recent statistics, as of January 1991 some 93 percent of blue-collar employees and 53 percent of white-collar employees were represented by unions.⁴⁸

The employee union with by far the largest percentage of blue-collar representation is the American Federation of Government Employees (AFGE). As of January 1989, AFGE represented nearly half (47 percent) of the blue-collar workforce. Most of the remaining blue-collar employees are represented by the Metal Trades Council (17 percent), the National Association of Government Employees (8 percent), the National Federation of Federal Employees (8 percent), and the International Association of Machinists and Aerospace Workers (7 percent).⁴⁹

Federal labor-management programs differ from non-Federal programs in three important ways: (1) Federal unions bargain on a limited number of issues—bargaining over pay and other economic benefits is generally prohibited; (2) strikes and lockouts are prohibited; and (3) Federal employees can not be compelled to join or pay dues to the unions that represent them.⁵⁰ For this reason, active dues-paying membership in unions is considerably less than the number of employees in bargaining units. Active membership is variously estimated at about a quarter⁵¹ to one-third⁵² of those a bargaining unit represents.

A recent GAO study based on interviews with labor-management experts indicated that the problems in the Federal labor-management relations

program “appear to be so widespread and systemic that piecemeal technical revisions would not be a workable solution” and that specific recommendations would be inappropriate without additional information. Many of the more important workplace decisions are seldom subject to negotiation, leaving union officials few alternatives but to argue individual grievances or procedural matters.⁵³ Moreover, current Federal labor relations statutes may not always be providing the necessary incentives for management to develop a cooperative venture with the union.⁵⁴

Relatively recently, OPM has encouraged labor and management to “initiate joint, cooperative efforts to create work environments which encourage and facilitate employee contributions to more effective personnel policies and organizational performance.”⁵⁵ Both OPM and the Federal Labor Relations Authority are independently reviewing the Government’s labor-management relations program, and the director of OPM has established a Federal Labor Advisory Group to promote dialogue and receive early input about employee concerns from recognized labor representatives.

Nevertheless, such labor-management cooperation is still viewed with suspicion by some participants, although others see the us-versus-them relationship as too costly for both sides. However, in the words of one local union president, “to make [labor-management cooperation] work we must build mutual trust between one another so we can all focus on long-range job security.”⁵⁶

⁴⁸ U. S. Office of Personnel Management, “Union Recognition in the Federal Government,” Washington, DC, January 1991, p. 34-35.

⁴⁹ *Ibid.*, pp. 22-23.

⁵⁰ U.S. General Accounting Office, “Federal Labor Relations: A Program in Need of Reform,” GAO/GGD-91-101, Washington, DC, July 30, 1991, p. 2.

⁵¹ Federal Employee’s New Digest, “NTEU Shows Gains, Now Number Two,” vol. 41, No. 17, Nov. 25, 1991, p. 3.

⁵² Government Executive, “Federal Unions: Down But Not Out,” September 1991, p. 24.

⁵³ See p. 5 of the source in footnote 47.

⁵⁴ Katherine C. Naff, “Labor-Management Relations and Privatization: A Federal Perspective,” *Public Administration Review*, vol. 51, No. 1, January/February 1991, pp. 23-30.

⁵⁵ U.S. Office of Personnel Management, “Federal Labor-Management Cooperation: A Guide to Resources,” Washington, DC, April 1990, p. 1.

⁵⁶ Peter T. Kilborne, “Worker Takeover Opens a New Path for Industry,” *New York Times*, National, November 22, 1991, p. 1.

Participative Management in the Blue-Collar Workforce

Immediately evident at virtually all of the sites we visited, particularly those in the defense agencies, were organizational initiatives to increase quality through participative management practices. Most of these programs fall under the Government's Total Quality Management (TQM) initiative or a variation thereof. In brief, TQM as applied in Federal agencies is a voluntary Governmentwide initiative to promote quality throughout the Civil Service. Some of its key features are its emphasis on customer needs, teamwork, long-term planning, and continuous improvement of every aspect of how work is done. TQM is "involving everyone in an organization in controlling and continuously improving how work is done, in order to meet customer expectations of quality."⁵⁷

These Governmentwide movements to promote greater quality throughout the Civil Service lend themselves particularly well to the Government's manufacturing and commercial activities. Despite its considerable popularity, at least in principle, the implementation of the TQM process or similar processes is not without obstacles. Some of the most serious challenges involve overcoming the debilitating effects of reductions in force and the natural resistance of employees, supervisors, and managers to think and do things in new and different ways: to build quality into a product or service, not by inspections or administrative decree but by a

commitment to build it in by those who do the work.

Typically, in the site visits and group interviews we found that knowledge about TQM varied considerably, even within the same organization. For example, while some employees had received many hours of TQM training, others in the same organization may have received little or none. Organizations with large numbers of employees found it particularly difficult to schedule and sustain an appropriate progression of TQM training, particularly in the face of declining resources. One agency, particularly active in promulgating TQM at the highest levels, had by design delayed TQM training for lower level employees so as not to raise employee expectations before their supervisors and managers had fully committed themselves to a participative approach.

Generally, both blue-collar employees and supervisors we interviewed welcomed TQM, in principle, but they had mixed views about its implementation. Most seemed to agree with the belief expressed by one blue-collar worker that the "time and age had come for the Government to start thinking quality, if we are to succeed in becoming a number one contender in the world market." However, others we interviewed remained skeptical about the implementation of TQM in a Government setting. They often cited inconsistencies between Federal regulations and the TQM philosophy. Among the

⁵⁷ David K. Carr, and Ian D. Littman, "Excellence in Government: Total Quality Management in the 1990s," Coopers and Lybrand, Arlington, VA, p. 3.

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inconsistencies specifically cited were the inability of most Federal managers to manage their own budgets and the requirement of managers to conduct annual performance appraisals of individual subordinates rather than teams.

The blue-collar supervisors we interviewed were particularly concerned about the administrative burdens of TQM or other participative management initiatives. They indicated they already had "too much stress" and "too much to do." In addition, a supervisor at an installation slated for closure was quick to point out that "TQM and efficiency alone don't keep us in business." He and others felt that there are too many external factors that can't be controlled or that change too rapidly for the bureaucracy to adjust to them.

Unions have expressed the most skepticism about TQM and participative management practices. For example, one national union flatly denounced the Government's TQM initiative as "one of the most dangerous threats that is faced by working men and women today."⁵⁸ This view sees TQM as an effort to

break the unions by getting workers to ignore their union representatives and to deal directly with managers to solve problems. This view is not held by all unions, since others view participative management initiatives as possible ways to achieve greater labor-management cooperation.

At the local level, union representatives at the sites we visited tended to take a relatively cooperative posture. Disagreements with management tended to be more about the level of union participation, timing, and the mechanics of the initiatives rather than about the basic philosophy or process. However, considering the overall mixed union response at the national level, it remains to be seen whether participative management initiatives such as TQM will be the success in the Government that many hope to see. That is because the success of any participative management initiative in the Federal blue-collar environment will depend on the extent to which the organization, the employees, and the union can work together in a spirit of cooperation and trust.

⁵⁸ International Association of Machinists and Aerospace Workers, "IAM Team Concept Policy," Memorandum to all grand lodge representatives, auditors, special representatives, airline and railroad general chairmen, business representatives and organizers, Washington, DC, Sep. 14, 1990. This union represents approximately 25,000 Federal blue-collar employees.

Downsizing in the Blue-Collar Workforce

Most blue-collar issues pale in comparison to the effects DOD cutbacks currently are having on the Government's blue-collar workforce. Few things are more debilitating and have a greater effect on workers and their families than the loss of a job. Yet, tens of thousands of Federal blue-collar employees are now facing this real threat, particularly in the DOD industrial community.

Although Federal blue-collar employees are not alone in facing the reductions in force, they are disproportionately affected by them. While Governmentwide layoffs increased from 1,246 in FY 1989 to 1,578 in FY 1990 and 5,753 in FY 1991, blue-collar employees—who comprise only about 17 percent of the Federal workforce—accounted for 26, 45, and 71 percent of these layoffs, respectively.⁵⁹ In addition to those laid off, there are many more employees whose work and family lives were otherwise affected by the cutbacks, through earlier than planned separations, transfers, details, and reorganizations.

It is beyond the scope of this paper to examine in detail the impact of the downsizing on the blue-collar workforce. The issues are complex, and policies and programs designed to assist displaced employees are constantly changing as managers and

policymakers in DOD, OPM, and Congress struggle to address the most critical needs in a fiscally responsible fashion. Nevertheless, a number of trends and issues have emerged that may help provide a context for managing the downsizing, particularly as it affects blue-collar employees.

Past and Future Cutbacks

DOD cutbacks are expected to continue at a relatively rapid rate on many fronts. Within the next 5 to 10 years, DOD is expected to proceed towards closure of at least 47 domestic installations and the realignment of another 28, out of a total of nearly 500 domestic installations.⁶⁰ The Navy is losing 3 of 15 aircraft carriers, the Air Force is losing 7 of 22 tactical fighter wings, and the Army is reducing its number of divisions from 28 to 18. With these, and many other reductions, there are losses of many civilian Federal jobs. More specifically, DOD expects to reduce its civilian positions at a rate of over 40,000 in each of the next 2 fiscal years, for total civilian personnel cuts amounting to over 120,000 through FY 1995.⁶¹ Many of these lost positions will be blue-collar positions. Although it had been expected that these losses could be achieved through normal attrition and hiring

⁵⁹ CPDF, data request of Apr. 23, 1992.

⁶⁰ L.R. Jones, "The Pentagon Squeeze," *Government Executive*, February 1992, pp. 21-27.

⁶¹ Christopher Jehn, "Impact of Base Closings on Department of Defense Civilians and Related Communities," Statement of the Assistant Secretary of Defense for Force Management at the Hearing Before the Subcommittee on Federal Services, Post Office, and Civil Service, Committee on Governmental Affairs, U.S. House of Representatives, Feb. 20, 1992.

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restrictions, it is increasingly becoming apparent that attrition rates are declining and that other strategies may be needed.

While the number of blue-collar employees has decreased considerably over the last 2 decades, that decrease tended to be relatively painless. In the past, blue-collar workers whose jobs were abolished or contracted out could often find other Government jobs or jobs with winning contractors.⁶² Moreover, many of the earlier cutbacks were sufficiently gradual that they usually could be accomplished through normal attrition. The Government often absorbed the cutbacks and typically provided employment for its displaced employees. This was possible in part because many of DOD's large industrial facilities often had 10 percent or more of its workforce in an on-call or temporary status.⁶³ These temporary employees provided the DOD's industrial facilities with important "buffers" and gave them the flexibilities they needed to accommodate the often unpredictable fluctuations in their workloads.

An analysis by the Office of Technology Assessment (OTA), however, indicates that today the climate is considerably different. During the cutbacks of recent years, the Government and the Nation may already have exhausted much of their ability to provide suitable alternative employment for displaced employees. Many of the lost jobs are not expected to return. The "buffers" have largely disappeared, and even the relatively small and gradual defense cutbacks could be stressful on a national scale.⁶⁴

In addition, the cutbacks are not expected to come evenly and some locations are likely to be hit harder than others. Base closures, in some ways, are the least problematic of the cutbacks in that they

provide as much as 5 or 6 years' notice; cutbacks in major weapons programs are far less certain and often more unexpected.⁶⁵ Any sudden cutbacks in these types of programs make the Government's blue-collar employees highly vulnerable, particularly when the cutbacks affect the maintenance and repair programs that have been the mainstay of the Government's blue-collar workforce.

A Shift From Production to Research and Maintenance

The United States is at a crossroads of making some broad strategic choices about its defense technology and industrial base. OTA expects that Government strategies will shift from a focus on production to one on research and development. As procurements are reduced, current weapons, communications, and other defense systems will remain in inventory longer than in the past, and the maintenance and overhaul of these systems will become increasingly more important. Emphasis is likely to shift from that of production to the retrofitting and upgrading of existing systems.⁶⁶

Need for Integrated Management

Given the current economy and the magnitude of the projected cutbacks, Federal managers are faced with difficult decisions. Downsizing is not something that many managers have been trained to do. They have typically been trained to build organizations, not to dismantle them. Nevertheless, the decisions they make will have long-term effects on how remaining employees, displaced employees, and the general public will view the Government as an employer.

⁶² U.S. General Accounting Office, "Federal Productivity: DOD's Experience in Contracting Out Commercially Available Activities," Washington, DC, November 1988, p. 22.

⁶³ M. Aguilar, R.J. Niehaus, and F.S. Sharkey, "Management of a Major Downsizing at a Naval Shipyard," U.S. Department of the Navy, Office of Chief of Naval Operations, Research Report OPNAV P16H-12-91, No. 52, Washington, DC, June 1991, p. 7.

⁶⁴ See p. 3 of the source in footnote 1.

⁶⁵ Ibid., pp. 8-9.

⁶⁶ Office of Technology Assessment, "Redesigning Defense: Planning the Transition to the Future: U.S. Defense Industrial Base," OTA ISC-500, Washington, DC, July 1991, p. 8.

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Because the issues are complex and many changes are difficult or impossible to predict, it is important that the management of the downsizing be highly integrated and proactive. OTA warns that if the industrial base "is allowed to restructure in the current ad hoc manner, it may be unable to respond to a future crisis."⁶⁷ GAO echoed this concern by noting that the Government's workforce planning efforts, as early as 1980,⁶⁸ have not been particularly good.⁶⁹ Their recent review of a DOD 5-year master plan highlights the variety of problems and difficulties that are encountered in efforts to forecast and predict industrial and commercial employment levels.⁷⁰

According to one study, one of the complexities of workforce planning in the Government's industrial settings is that industrial installations are project-driven; that is, they experience definite workload cycles. Some of these cycles may take multiple years, as in the overhaul of a ship. Different types and numbers of employees are needed as the workload progresses through the worksite. Initially, much of the work is associated with planning and preparation of the actual job. In the case of a major overhaul, the emphasis then shifts to evaluating what needs to be repaired, disassembling components, and ordering parts and materials. This is followed by actual repair work and finally assembly and testing to ensure that the work was properly done. Throughout this cycle, the mixture of white- and blue-collar employees and their skills must be phased in to fit the changing work and workload.⁷¹ In addition, unlike original production work, repair work is much less predictable. Preliminary estimates of the repair required may need to be revised several times as additional damages are uncovered during disassembly.

Organizationally, downsizing has many potential pitfalls. There may be unexpected costs. While

overall attrition is declining in DOD industrial organizations, too many employees may take advantage of an incentive to leave or retire early when one is offered in a particular organization. In letting attrition run its course in such organizations, some of the most qualified employees may also opt to leave, precisely at a time when the organization most needs highly qualified workers. "Because attrition is voluntary, we can't predict where or when employees will leave. In some cases, local installations are experiencing grade and skills imbalances—they may have surplus employees in one skill and not enough employees in another."⁷²

Most supervisors that I have encountered do not and have not been provided the training necessary to make them leaders! They do not have the necessary technical expertise to understand the material they are supposed to manage. Therefore, they have great difficulty trying to understand the repair process.

Electronics Mechanic, WG-10

Sometimes, organizations that are downsizing may find themselves in the awkward position of simultaneously hiring new employees. Presumably, the new hires are needed because they have the necessary skills that would not be obtainable by the retraining of displaced employees. Decisions to hire during a downsizing may include considerations of an organization's long-term goals to meet future workload needs when many in the current workforce will have retired. As examples, both Mare Island (CA) and the Norfolk Naval Shipyards continued to enroll applicants into their apprentice

⁶⁷ Ibid., p. 9.

⁶⁸ See p. 15 of the source in footnote 16.

⁶⁹ U.S. General Accounting Office, "The Changing Workforce-Demographic Issues Facing the Federal Government," GAO/GGD-92-38, March 1992, p. 15.

⁷⁰ U.S. General Accounting Office, "Defense Force Management: Limited Baseline for Monitoring Civilian Force Reductions," GAO/NSLAD-92-42, Washington, DC, February 1992, p. 1.

⁷¹ See p. 33 of the source in footnote 62.

⁷² Christopher Jehn, op. cit.

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programs even while they were conducting reductions in force. This hiring was a necessary step to help ensure an ample supply of highly trained journey-level workers to do the work of the shipyard 5 or 10 years from now.

Although the immediate needs for the services of Federal blue-collar employees have been drastically cut, future years are likely to see this turn around, particularly as the shift towards maintenance and repair becomes more complete. This component long has been the mainstay of the defense industrial workforce, since the armed services historically have been wary of placing too much reliance for maintenance on the private sector.⁷³ The anticipated turnaround in maintenance and repair makes it imperative that valuable expertise not be too hastily lost—either voluntarily or involuntarily. Personnel scattered may take years to reconstitute.⁷⁴

Assistance Programs

With increases in layoffs and the other displacements that they entail, Federal policy and decisionmakers are challenged to ensure that a full range of assistance programs is in place and that the programs meet both the needs of the organization and the needs of those affected by the cutbacks. A review of the downsizing literature shows that early notification of a reduction in force (RIF) is one of the most effective management strategies.⁷⁵ Many of the features of successful assistance programs, such as early notification, are the same for all displaced workers. Recent OPM regulations⁷⁶ requiring agencies generally to give all employees and their representatives at least 60 days specific notice prior to a reduction in force, is a step in this direction.

Because the needs of different groups of displaced employees will not always be the same, assistance programs must be tailored accordingly. Assistance programs targeted to displaced blue-collar workers, in particular, must recognize the extensive roots of these employees in their local communities. More often than white-collar employees, blue-collar employees have roots in the community going back generations. Consequently, as a group, they are generally less prone to relocate⁷⁷ and may require special inducements and assistance in moving to another location.

A variety of assistance programs are currently available to Federal employees displaced by budget reductions. MSPB encourages managers in downsizing organizations to make sure that a full range of such assistance programs is in place in their organizations and that affected employees are made fully aware of these programs and their employment options. Whenever possible, management should encourage blue-collar employees to participate in any decisionmaking processes about the nature and types of programs to be made available.

Both OPM and other Federal agencies already have many programs in place for assisting displaced employees. These programs typically have given qualified displaced employees from an agency priority referrals, reemployment rights, or priority placements over outside hires into the agency. DOD's program extends to all DOD agencies and *requires* them to place qualified displaced DOD employees before filling vacancies with other applicants. DOD additionally provides relocation expenses that may be involved.⁷⁸

⁷³ See p. 14 of the source in footnote 65.

⁷⁴ *Ibid.*, p. 4.

⁷⁵ S.W. Kozlowski, G.T. Chao, E.M. Smith, J. Hedlund, and P.M. Walz, "Organizational Downsizing: Individual and Organizational Implications and Recommendations for Action," WP-PU-91-01, U.S. Army Research Institute for the Behavioral and Social Sciences, Alexandria, VA, 1991.

⁷⁶ Federal Register, vol. 56, No. 173, Sep. 6, 1991, pp. 43995-43997.

⁷⁷ See p. 20 of the source in footnote 1.

⁷⁸ Office of the Deputy Assistant Secretary of Defense, "The Department of Defense Priority Placement Program: How it Can Help You!," Washington, DC, pp. 1-8.

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While OPM and DOD are generally positive about the programs they have in place, GAO, the unions, and various members of Congress have expressed a variety of concerns. GAO noted that Federal job placement programs, particularly OPM's, have not placed a high proportion of registrants in jobs.⁷⁹ GAO's study showed that 5,747, or 23 percent of the workers participating in DOD's Priority Placement Program were placed in other jobs in FY 1991, while OPM placed only 58 employees of over 4,000 registrants.

Other criticisms of the assistance programs included the short time (24 hours) displaced employees have to decide to accept a valid job offer, the short lead time for eligibility (receipt of a 60-day notice), and the limitation of the DOD priority placement program only to the defense agencies. However, more recently, changes in the various programs have begun to address these and other issues. Displaced DOD employees are being provided more time to make a decision to accept a job offer, and eligibility for many of the programs no longer requires receipt of a specific RIF notice. OPM also has now given agencies the option of issuing a Certification of Expected Separation to employees who are most likely to be separated and who will have limited job opportunities in the local area.⁸⁰ This certificate is particularly useful in that it permits employees *potentially* displaced to obtain earlier access to OPM and agency assistance programs and also gives them earlier eligibility for the Department of Labor's (DOL) Economic Dislocation and Worker Adjustment Assistance (EDWAA) program.

EDWAA is an outplacement and retraining assistance program of DOL that is operated at the State and local level. Although the quality of services has been uneven, DOD's infusion of \$150 million into the program and regulations facilitating the allocations of funds to where they are most needed, may

make this a more useful program, particularly for blue-collar employees, since this program has historically focused more on the needs of blue-collar than white-collar employees.⁸¹

A wide variety of options are being considered or are being implemented at this time, as the Administration, Congress, DOD, OPM, and others work to address the numerous issues related to the DOD downsizing. While some of these options address the immediate needs of those losing their jobs, others are designed to minimize the impact on local communities hard hit by base closures. On an even more macro-level, other legislative proposals are designed to shift the focus from defense spending to domestic initiatives.

Lessons Learned

Managers and policymakers can learn much from an examination of previous and ongoing downsizing initiatives. Pitfalls can be avoided and particularly effective strategies can be identified and implemented. For example, a Navy study of the downsizing at the Mare Island Naval Shipyard and the displacement of 444 employees there in 1990 documented a number of management options and strategies to cut costs. A strong communication program, using multiple media both in-house and publicly, was considered a cornerstone in the shipyard's downsizing effort. Also useful were job clubs, workshops, designated points of contact, and career counseling to assist targeted employees in identifying their career objectives and in developing their job search skills. Job fairs were held on a regular basis to help match targeted employees with potential employers, public as well as private.⁸²

However, other aspects of the Mare Island experience were more problematic and could be particularly instructive for other managers faced with implementing a downsizing. These aspects included

⁷⁹ U.S. General Accounting Office, "Federal Employment: Displaced Federal Workers Can Be Helped by Expanding Existing Programs," GAO/GGD-92-86, Washington, DC, May 1992, p. 1.

⁸⁰ Federal Register, vol. 57, No. 101, May 26, 1992, pp. 21889-21890.

⁸¹ See p. 21 of the source in footnote 1.

⁸² See the source in footnote 62.

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confusions about some of the more technical aspects of reductions in force; tensions about the impact of performance appraisals on retention lists; complications involving worker's compensation; and the difficulties surrounding the mechanics of last-day processing of personnel actions. Shipyard management was also hampered by unwanted attrition in critical areas, unfilled vacancies, misassignments, and employees being downgraded but performing the same work they had performed before.

The Mare Island experience also teaches managers in other organizations facing downsizing that they need to closely monitor and adjust their strategies throughout a downsizing and to solicit inputs from all sources. Turnover predictions based on historical data are often imprecise and require adjustments made on the basis of feedback from actual personnel separations and new hires.

In addition, it is particularly important that the criteria for selecting employees for separation do not have unanticipated adverse effects on women or members of minority groups. Current RIF criteria based on tenure, veterans' preference, and seniority (adjusted for performance ratings) may have adverse effects on members of some groups. For example, a GAO study of the Mare Island downsizing in 1990 noted that the layoff rate for women was 2.7 percentage points greater (7.6 percent vs. 4.9 percent) than the rate for men. Only 6 percent of the women (compared with 49 percent of the men) had the benefits of veterans' preference and women had 11 years seniority versus almost 17 years for the men. In addition, the shipyard decided to eliminate a large percentage of its lower-graded blue-collar positions, a disproportionate number of which were occupied by blacks. GAO noted that:

The RIF's apparent disproportionate effect on women and blacks might have been recognized and addressed earlier had the Navy issued timely instructions with substantive guidance on how to carry out an EEO impact analysis.

Such disproportionate effects are of course to be avoided for reasons of equity. GAO recommended that EEO impact analyses be conducted before layoff notices are issued and that activities undergoing RIF's maximize opportunities under the regulations for displaced employees with higher retention factors to qualify and compete for jobs in separate competitive levels with unique requirements.⁸³ Agencies should also note that unanticipated adverse effects on some subgroups may lead to an organization facing costly class action suits at a time when its scarce resources might be more constructively used elsewhere.

Because studies of downsizing can provide so much useful information, a consolidation and analysis of information about successful and unsuccessful downsizing strategies would provide Federal managers faced with cutbacks a means of learning about the full range of options. Although studies and analyses, like the Mare Island studies, are currently under way, these efforts are usually highly decentralized; greater centralization and sharing of information about downsizing strategies is needed.

Whatever strategies are developed should include explicit consideration of the needs of the blue-collar workforce. Although there are many ways in which blue- and white-collar employees are affected similarly by a downsizing, their needs are also different in many ways. Sensitivity to these different needs is particularly important, given the relatively large proportion of blue-collar employees who are directly affected by downsizing activities.

Blue-Collar Perceptions of Downsizing

Although the task of reducing the number of employees in their organizations is a high priority challenge faced by many managers and decisionmakers today, relatively few of the employ-

⁸³ U.S. General Accounting Office, "The 1990 Reduction in Force at the Mare Island Naval Shipyard," GAO/NSIAD-91-306, Washington, D.C., pp. 2-5, 11.

ees or supervisors in the group interviews we conducted commented on the cutbacks. This was surprising, since cutbacks had been or were being experienced by blue-collar employees at virtually all of the installations we visited during FY 1991. Possibly, many of the employees interviewed were not yet directly and immediately affected by the downsizing; or they may not have had sufficient experience with their agency's downsizing procedures to raise the issue.

From the relatively few cutback-related comments we received from the blue-collar workers we interviewed, the cutbacks seemed to be viewed as the result of events outside the organization and beyond the control of agency managers. One of the concerns they did express involved the large number of RIF notices that typically are sent out for what turn out to be relatively few involuntary separations. This seems to be corroborated by a GAO study that found that during the first three quarters of FY 1991, over 12,000 RIF notices were issued for less than 4,500 involuntary separations.⁸⁴

Consistent with the analysis by OTA, the outlook for finding alternative job opportunities for blue-collar employees, particularly in the private sector, was viewed as bleak by the employees we interviewed. Many of the people we interviewed reported that private sector industries in their communities and within their commuting areas had already closed or were experiencing large cutbacks. OTA notes, for instance, that only one merchant ship is currently in production in the United States, compared with about 400 in Japan, Korea, and Europe, and that in this country today's manufacturing environment is generally hard put to provide employment for displaced blue-collar employees.⁸⁵ This lack of outside opportunities, particularly for blue-collar employees, also was highlighted by the outplacement team at one installation, which reported that "job opportunities for white-collar employment were running six times greater than those for blue-collar" in the labor market area.

Agency cost-cutting efforts and a strict hiring freeze that DOD had under way during much of our study have manifested themselves in a number of ways. On the questionnaires administered to the interview groups, 50 percent of the employees and 42 percent of the supervisors indicated they did not have enough trained people in their work unit to do the work. Most supervisors reported that they had fewer workers but an equal or greater workload compared with previous years. For example, the supervisor of one unit responsible for the heating, air conditioning, water, and electrical systems reported having "half the number of people for the same number of buildings."

The leaner numbers of employees were a major concern not just in DOD, but also in the non-DOD organizations we visited. The blue-collar workers we interviewed emphasized that the Government was losing "valuable expertise" in critical areas. The Government was seen to be losing "its institutional memory," with many vacancies going unfilled during the hiring restrictions. Current work groups increasingly included employees who were "on loan" or who otherwise were "detailed" into the area. One sheetmetal shop, for example, "got three plumbers." Others reported that sometimes detailed employees don't have the qualifications to do the work, which can be a serious problem in making work assignments, particularly when the work is hazardous.

The budget cutbacks also manifested themselves in some other ways. While supervisor-to-employee ratios generally ranged from 1 supervisor for 5 to 20 employees, at several installations there were first-line supervisors who reported having as many as 40 or more subordinates—the direct result of reductions in the number of layers of supervision at their installation. Many work leader, helper, clerical, and administrative support positions had also disappeared at many of the worksites visited. Although the cutbacks in these latter positions have improved certain productivity statistics (e.g., the direct/

⁸⁴ Bureau of National Affairs, Federal Government Service Task Force, "The Impact of Downsizing on DOD Civilian Personnel," Legislative Update, January 1992, p. 3.

⁸⁵ See p. 12 of the source in footnote 1.

Downsizing in the Blue-Collar Workforce

indirect labor ratio), both the employees and supervisors we spoke with expressed concern that currently too many trained journey-level workers must now assist in the administrative work of the

unit or do work historically done by lower graded workers. If this is the case, this leads to a real reduction in the work output per journey-level worker.

Other Blue-Collar Workforce Issues

While assisting employees who are displaced in a downsizing is among management's highest priorities, management should also be aware of, understand, and respond as appropriate to numerous additional issues that are of great concern to the Government's blue-collar workers. Some of these issues are directly related to the impact a downsizing has on those who remain at the affected installation. Others affect blue-collar workers across the board.

Information Needs of Blue-Collar Workers Who Remain After a Downsizing

Having a good knowledge of demographics, turnover, and personnel systems is important to managers making decisions affecting workers who remain after a downsizing. However, the managerial information base is incomplete without more information about the views, perceptions, and attitudes of these workers. Specifically, knowing more about the views of workers who remain after a downsizing can have important implications for: (1) How they are motivated to stay and perform well, and (2) How they might receive proposed personnel policies in their changing organization.

The information we present later in this section on the attitudes and concerns of blue-collar workers does not distinguish between those who have been through a downsizing versus those who have not been. However, the 1991 information (obtained for the present study) predominantly reflects the views

of employees in installations which have experienced or are expected to experience a downsizing.

Responses to Remaining Workers' Concerns

Downsizing literature that we examined provides information on the effects of downsizing that managers can use right now. While noting that those who remain after a downsizing will experience negative effects and will need special attention paid to their needs, the literature also indicates that even before that, an organization needs a good assistance program for those who are *displaced*. The reason is that, besides having an immediate positive effect on the displaced employees, such a program is a first step in energizing those who *remain*.

Efforts aimed specifically at the workers who remain will need to address a much wider range of concerns. The downsizing literature notes that, for example, those who remain may feel unfairly overburdened, may be less committed (or loyal) to the organization, may be more willing to leave, may generally demonstrate lower morale and decreased performance, and may experience job insecurity.⁸⁶ (As indicated above, a good assistance program for those already displaced can *help* ease insecurities for those who remain. However, it can't be expected to eliminate them.)

⁸⁶ Ibid.

Other Blue-Collar Workforce Issues

Concerns of Federal Blue-Collar Workers in General

The rest of this section identifies and examines some of the issues and concerns that appear to be most pressing for Federal blue-collar employees and that may require special attention from Federal managers and policymakers. Some of the data are also presented for white-collar workers, for comparison purposes. Most of this discussion derives from: (a) an analysis of MSPB's Merit Principles Survey administered Governmentwide in 1989 to Federal blue- and white-collar workers, (b) the present study's questionnaire responses and group interviews of 153 blue-collar nonsupervisors and 116 first-line supervisors during 1991, and (c) interviews with agency managers and key officials, also conducted as part of this study.

Although the questionnaire and interview sample sizes were limited and the results should not be construed as reflecting the views of the Federal blue-collar workforce as a whole, they provide some rich and preliminary insights into the issues that concern blue-collar workers in 1991. The MPS data, however, because they are derived from a representative sample of employees, can be considered to reflect the views of employees Governmentwide.

I will always feel that white-collar workers look at us as second rate and the pay is beginning to show it.

Water Treatment Plant Operator, WG-7

It is important to note throughout this discussion that the survey responses and interview comments are the *perceptions* of blue-collar employees. Because they are perceptions, they may or may not always accurately portray the work situation. Nevertheless, because these perceptions are believed to be factual by those who hold them, they often become the sole basis on which the respondents act and interpret the events around them. While the blue-collar employees we interviewed expressed their views about a wide variety of topics, this section will focus on

four topics that were of particular concern to the interview participants: morale and job satisfaction, quality of supervision, performance appraisal, and training.

Morale and Job Satisfaction

Despite the pride they took in their work and the dedication they showed towards doing a good job, a theme that pervaded the group interviews was a perception on the part of nonsupervisors and supervisors alike that they were "treated as second class citizens" in their organizations, relative to white-collar employees. Many reported that they were not treated with a great deal of respect. Some said they "feel treated like cattle or slaves." Others put it in different ways; for example: "Most of the workers feel that they are only here as drudges."

Seemingly innocuous events signaled to these blue-collar employees that they are perceived by white-collar employees as second class. For example, "No one talks to blue-collar employees at a white-collar party." "Managers have to read blue-collar employees' name tags at awards ceremonies." "Managers don't come down to the shop floor." Blue-collar employees felt that their uniform or work clothes make them conspicuous and stigmatize them outside their immediate worksite. One high-graded mechanic was "confused for a janitor and ordered to clean up a floor spill." Another worker on the way to the conference room for the group interview for this study said he was questioned and asked to explain what he was doing away from his work area.

Although these examples may appear to be isolated incidents and may not always be without justification, there was widespread concurrence among the group interview participants that "second class" treatment was prevalent. On the interview questionnaires, 62 percent of the nonsupervisors and 68 percent of the supervisors agreed with the statement that "employees/supervisors are treated as second class citizens in this organization." The magnitude and intensity of these perceptions should not be overlooked. As one WG-10 rigger said in written comments:

The first priority [of management] should be to create a system by which all deserving blue-collar employees are treated like educated and

trained adults, not as cattle from which no intelligence or input can be gathered. We can do more than only react to orders. Management's attitudes towards the blue-collar must be changed for a better blue-collar workforce to emerge.

Given the downsizing and other cutbacks being experienced at virtually all the installations we visited, it was not surprising that low morale in the work unit was frequently mentioned as a concern during the group interviews. Questionnaire responses confirmed this. Just 25 percent of the blue-collar nonsupervisors indicated that "Morale in my work unit is high," while 42 percent agreed that "There is too much stress on my job," and 55 percent indicated there was "Too much red tape to do a good job."

The quality of management needs to improve. Management seems to feel that we cannot be trusted to do our job well; yet when anything goes wrong, we the mechanics are blamed.

Aircraft Mechanic, WG-10

Despite these relatively negative perceptions about the work environment, the blue-collar employees interviewed expressed satisfaction in their work, a response that is consistent with the MPS findings. Table 12 shows that blue-collar respondents, like their white-collar counterparts, were generally positive about their work. Approximately 7 out of 10 employees in both groups indicated they were satisfied with their jobs. Nearly 9 out of 10 employees in both groups found their jobs to be meaningful, and 94 percent in each group indicated that they had the skills needed to do their jobs. In addition, virtually all (98 percent) blue- and white-collar employees indicated that it was important for them to have a voice in decisions affecting their work.

Although 94 percent reported having the *skills to do their jobs*, only two-thirds of the MPS respondents—both blue- and white-collar—thought their *jobs make*

good use of their skills. This suggests that some supervisors and managers may be underutilizing the skills of the employees and that employees may have skills for additional tasks and responsibilities that are not currently being tapped. This may also help explain why 36 percent of the MPS blue-collar employees (nonsupervisors and supervisors combined) believed that the *quality* of their work could be improved and 28 percent thought the *amount* of their work could be improved with the same people in their work unit. On the interview questionnaires administered 2 years later for this study, 66 percent of the nonsupervisors and 53 percent of the supervisors believed that the *amount* of work could be increased. This is a surprisingly large change in perception and may need to be examined further, especially since the blue-collar supervisors we interviewed in 1991 reported working in relatively understaffed work units.

Even though they often feel treated as second class citizens, blue-collar employees are generally more positive in their attitudes towards the Government as an employer than white-collar employees. Compared to white-collar employees, blue-collar employees who responded to the MPS in 1989 were more likely (60 percent vs. 47 percent) to recommend the Government as a place to work. Clues to their positive attitude may be found in their reasons for staying in Government: annual and sick leave benefits, job security, and retirement benefits were rated particularly high as reasons for staying.

It seems that if there was more communication between the employees and supervisors, there would be more cooperation overall. I think it would help a little if you get a pat on the back once in a while.

Materials Handler, WG-06

Although not among the top reasons for staying, health insurance was noticeably more important for blue-collar employees than for white-collar employees, while flexible work schedules were much less

Other Blue-Collar Workforce Issues

Table 12. Job Satisfaction: Attitudes of Federal Blue-Collar and White-Collar Employees

Question (Response)	Percent Responding		
	Blue-Collar	Diff. ¹	White-Collar
Job Satisfaction/Turnover (Agree)			
I would recommend the Federal Government as a place to work	60	+13	47
The work I do on my job is meaningful to me	93	+6	87
In general, I am satisfied with my job	73	+3	70
Overall, I am satisfied with my current pay	30	+3	27
Job makes good use of my skills	69	+1	68
It is important for me to have a voice in decisions that affect my work	98	0	98
I have the skills I need to do my job	94	0	94
During the next year I will actively look for a new job outside workgroup	28	-5	33
During the next year I will actively look for a new job outside Government	10	-7	17
Reasons to Stay in Government			
Health insurance	46	+12	34
Monetary incentives (e.g., awards) to perform well	38	+8	30
Annual and sick leave benefits	86	+7	79
Retirement system	71	+6	65
Job security	80	+2	78
Work itself	60	-2	62
Impact on public affairs	8	-15	23
Flexible work schedules	33	-20	53
Reasons to Leave the Government			
Promotion opportunities	39	-4	43
Physical work environment	20	-6	26
Public image	8	-15	23
Private sector job opportunities	20	-19	39
Salary	22	-23	45

¹ "Diff" refers to the difference in the percent of blue- and white-collar employees responding to the item, arranged from maximum difference in one direction to maximum difference in the other direction.

Note: Both the blue- and white-collar data include responses from supervisors.

Source: 1989 Merit Principles Survey. Questions are slightly edited to facilitate the presentation.

important for blue-collar employees.⁸⁷ Changes in either of these programs may be expected to affect these two employee groups differently.

Although comparisons of the MPS and responses on the interview questionnaires must be treated with caution, a comparison of the responses, nevertheless, suggests some possible trends. Despite methodological differences between the MPS and the interview questionnaires, responses (attitudes) on some identical questions were quite comparable. For example, 93 percent of the MPS blue-collar respondents indicated that their job was meaningful, compared to 89 percent of the questionnaire respondents. In addition, the attitudes of the blue-collar employees towards their immediate supervisors were virtually identical on the two survey instruments.

Something needs to be done to raise morale.

Sheetmetal Mechanic, WG-11

Some of the blue-collar attitudes that might be expected to have changed since the administration of the MPS in 1989 did just that. General job satisfaction decreased from 73 percent to 64 percent, having made good use of their skills dropped from 69 percent to 60 percent, and willingness to recommend the Government as a place to work decreased from 60 percent to 48 percent. Level of satisfaction with pay, however, *increased* from 30 percent to 39 percent. Also, more (66 percent vs. 28 percent) of the employees we surveyed in 1991 thought the amount of work in their unit could be increased compared to the employees we surveyed in 1989.

What emerges from a synthesis of the above information on attitudes is that blue-collar workers, like white-collar workers, are generally satisfied with the work they do but they nevertheless tend to feel treated as second class citizens in their organizations. Although the blue-collar workforce generally tends to be more positive than the white-collar workforce about the Government as an employer, recent workforce cutbacks appear to have eroded this positive attitude, and the current general morale in blue-collar work units is low.

Supervision

The second topic that emerged as a major theme throughout our study was that of supervision. Evidence that the quality of supervision may be more of an issue in the blue-collar than the white-collar workforce came from virtually every source of information.

Results of the Merit Principles Survey. Despite many similarities, blue-collar MPS respondents were consistently less positive than white-collar respondents in their attitudes towards their immediate supervisors.⁸⁸ Even though blue- and white-collar employees had expressed equally high interest in participating in decisions affecting their work, only slightly more than half of the blue-collar employees indicated that supervisors *encouraged* their participation or *solicited their ideas and suggestions*. For white-collar employees, the participation rates were almost 10 percentage points higher. These differences suggest that blue-collar employees, in comparison to white-collar employees, may be experiencing a greater gap between desired participation and actual participation in the decisions affecting their work.

On the MPS, both blue- and white-collar employees gave their immediate supervisors relatively high

⁸⁷ The lower importance of flexible work schedules for blue-collar employees may, in part, reflect possible differences in the extent to which flexible work schedules are available to blue-collar employees.

⁸⁸ While most blue-collar employees work for blue-collar supervisors, a relatively small percentage work for military or for white-collar supervisors. Because precise data are not available about the number of blue-collar employees working for supervisors who are not blue-collar supervisors (WS), ratings of the supervisors of blue-collar employees include some ratings of supervisors who are white-collar or military.

Other Blue-Collar Workforce Issues

ratings on *two-way communication* and *fair treatment*, but ratings on *organizing the work group* effectively and on *leadership* were low—particularly for blue-collar supervisors, as is shown in table 13. Just 43 percent of the blue-collar employees agreed that their supervisor organized the workgroup effectively, and just 44 percent indicated that their supervisor had good leadership skills.

The largest difference between blue- and white-collar employees was on the rating of the supervisor's technical skill. While 70 percent of the white-collar employees reported that their supervisors had good technical skills, only 56 percent of the blue-collar employees made this claim. This may indicate that blue-collar supervisors lack necessary technical skills or that technical skills are more important for blue-collar than for white-collar supervisors and that, therefore, deficiencies are more apparent to subordinates. This difference may also derive from the attitudes of some blue-collar employees who work for supervisors who are white-collar or military.

There should be more rotation among job assignments in my skill. No mechanic should have to stay working in one area for all time.

Aircraft Mechanic, WG-10

An examination of the technical (or other) skills of first-line blue-collar supervisors might look at the extent to which supervisors may be selected on bases *other* than job-related knowledges and skills. More so than for white-collar employees, blue-collar employees reported on the surveys—and also during the group interviews—that jobs or job rewards were made on the basis of nonmerit factors. Although these reports are likely to be inflated due to the tendency of nonselected employees to attribute nonpromotions or nonrewards to factors other than their own lower qualifications, consideration of nonmerit factors can not be totally ruled out. Some 37 percent of the blue-collar employees (vs. 28 percent for white-collar) reported

on the MPS that they were denied a job or job reward because someone else was selected based on the “buddy system.”

In addition, allegations about nonmerit personnel management activities among blue-collar employees

The buddy system is a problem that is prevalent here. It's all over, and it is impossible to change and/or circumvent it. If you're not "drinking buddies" with the boss, you might as well forget about any recognition for the job you do. I would estimate that 80 percent to 85 percent of the supervisors here operate like this.

Warehouse Worker/Forklift Operator, WG-06

must be viewed in the context of blue-collar workers who have often lived in the same geographic area as their coworkers and participated in many of the same community and social activities. This context provides greater real and perceived opportunities for nonmerit activities and may explain, in part, a pattern of higher incidences of alleged prohibited personnel practices. For example, more blue- than white-collar employees reported denials of jobs or rewards because of family relationships (12 percent vs. 5 percent) or because of race, sex, national origin, or other nonmerit factors (20 percent vs. 14 percent).

Results from the group interviews. Participation in management was important to the blue-collar nonsupervisors in the interview groups, with these employees repeatedly asking to be more involved in the decisions affecting their work. Supervision was also a dominant theme during the group interviews. Nonsupervisory blue-collar employees often viewed their immediate supervisors as “pawns of upper management—afraid to make decisions for fear they might be wrong.” Confirming the findings on the MPS, the nonsupervisors repeatedly empha-

Other Blue-Collar Workforce Issues

Table 13. Supervision: Attitudes of Federal Blue-Collar and White-Collar Employees

Question (Response)	Percent Responding		
	Blue-Collar	Diff. ¹	White-Collar
Supervision/Management (Agree)			
My immediate supervisor has organized our work group effectively	43	-3	46
I have trust and confidence in my immediate supervisor	54	-4	58
There is effective two-way communication between my immediate supervisor and me	61	-6	67
My immediate supervisor treats me fairly	66	-7	73
My immediate supervisor has good leadership skills	44	-9	53
My immediate supervisor encourages my participation in making decisions	55	-9	64
My immediate supervisor encourages me to offer ideas and suggestions	53	-9	62
My immediate supervisor has good technical skills	56	-14	70
Productivity/Quality			
Quality of work can be increased (To a Great or Considerable Extent)	36	+12	28
Amount of work can be increased (To a Great or Considerable Extent)	28	+4	24
Quality of new coworkers from outside Government (Above Average or Outstanding)	27	-9	36
Quality of coworkers (Above Average or Outstanding)	45	-10	55
Quality of coworkers who have left (Above Average or Outstanding)	46	-12	58
Prohibited Personnel Practices (Yes, it happened to me)			
Denied job or job reward because of selection based on "buddy system"	37	+9	28
Denied job or job reward because of selection based on family relationship	12	+7	5
Denied job or job reward because of selection based on race, sex, etc.	20	+6	14
Subjected to reprisal for making a "whistleblower" disclosure	12	+6	6
Pressured to resign or transfer based on political affiliation	4	+3	1
Asked by superior to provide political contribution or service	4	+2	2
Denied job or job reward because of selection based on political affiliation	3	+2	1
Influenced to withdraw from competition for a job	6	+1	5

¹ "Diff" refers to the difference in the percent of blue- and white-collar employees responding to the item, arranged from maximum difference in one direction to maximum difference in the other direction.

Note: Both the blue- and white-collar data include responses from supervisors.

Source: 1989 Merit Principles Survey. Questions are slightly edited to facilitate the presentation.

Other Blue-Collar Workforce Issues

sized the need for their first-line supervisors to be technically competent in the trades they supervise. Given the nature of the work, nonsupervisors want their supervisors to "talk the same language," to fully understand the work, to fully appreciate the urgency of requests (e.g., the need for tools or supplies), and to realize the implications of a suggestion. The repeated emphasis by blue-collar employees on the need for their supervisors to have technical expertise flies against conventional wisdom (typically derived from studies of white-collar supervisors), which generally attributes problems of poor supervision to selection processes being based predominantly on technical expertise at the expense of supervisory skills.⁸⁹ Again, these findings may be skewed by blue-collar employees being supervised by supervisors who were not blue-collar. Such supervisors, in particular, might be expected to be perceived as not having the requisite technical expertise to be a good supervisor of blue-collar employees.

Get rid of first level supervision within my branch. The blue-collar grade levels are high enough (WG-13, etc.) that close supervision is not needed. I'm burned out as a government employee. Being treated as a 2nd-class person has taken its toll on me. I'm tired of fighting the managers who have over-inflated titles and no technical skills. They constantly (by virtue of their position) undercut everything blue-collar people try to improve. I just want to collect my retirement and go to work in the private sector and put Government service behind me.

Electronics Mechanic, WG-13

Although 61 percent of the MPS blue-collar respondents indicated there was effective two-way communication with their immediate supervisors, poor communication was mentioned as a major problem

by the blue-collar workers we interviewed. Nonsupervisory employees repeatedly said that they must often rely on rumors or the news media for their information and that they have difficulty getting information through the system. Some of the poor communication was believed to reflect management's attitude that "employees don't need to know." "Time taken to communicate is viewed [by management] as time taken away from production."

Better communication and understanding between supervisor and employees would go a long way in the quality and work effort put forth by us the employees.

Heating Equipment Mechanic, WG-10

Communication problems may be the result of many factors. For example, they may reflect a supervisor's lack of technical skill or knowledge or lack of "people" skills. Although communication problems are not unique to blue-collar employees, the nature of blue-collar work and the work environment suggest that communication problems may be more severe, or at least different, for blue- than for white-collar employees.

Although the blue-collar nonsupervisors directed much of their negative attention to their immediate supervisors, the problems often extended beyond the first-line supervisor to the entire management system. This became more apparent during the interviews with the first-line supervisors. Many of the first-line supervisors readily "confessed" and admitted that they themselves often lacked the information desired by their subordinates. Others said they "feel powerless" and treated like "door-mats" by upper level management. They frequently mentioned stress (57 percent reported *too much stress* on the interview questionnaires). On the one hand they felt that they were held responsible and personally liable for the activities of their work unit,

⁸⁹ U.S. Merit Systems Protection Board, "Federal First-Line Supervisors: How Good Are They?," Washington, D.C., March 1992, p. 3.

while on the other hand they felt that they had little direct control over the factors affecting these activities. Many supervisors wished they had more time "to supervise" and called for a reduction in the "paperwork" and "red tape." On the interview questionnaire, 78 percent of the supervisors agreed that there was *too much red tape*. They often perceived the paperwork as unnecessary and believed that some of it never gets used.

Often, the supervisors in the interview groups indicated that they get "little support from higher management." This may help explain why fewer than half (46 percent) agreed with the questionnaire statement, "I have trust and confidence in the management of this organization." An example of the organizational climate in some organizations is illustrated by the comment of one supervisor: "Management is afraid to pat us on the back for fear that we might let up."

Consistent with their desire for greater participation, a large percentage of the blue-collar supervisors indicated that they wanted "greater autonomy" from upper level management and "more authority" over managing their workers. The nonsupervisors frequently indicated that they also favored greater authority for their immediate supervisors so these supervisors could: (a) "enforce the rules and regulations" and "get rid of the deadwood"; (b) obtain needed tools and supplies; and (c) be more available to the workers.

MSPB and OPM studies of supervision. Two recent studies, one by MSPB and one by OPM, that looked at Federal white-collar first-line supervision have identified some problems in this area, as shown below. Such problems may be even more acute among blue-collar supervisors, if the above-mentioned pattern of more negative blue-collar views towards supervision persists.

Specifically, in the MSPB study, more than 20 percent of the subordinates rated their white-collar supervisor as "Barely acceptable/Cannot do" on seven important supervisory tasks:

- ☐ Be consistent and fair in dealing with employees (27 percent);
- ☐ Use performance elements and standards to assess performance and give feedback (25 percent);

- ☐ Schedule work so that available resources are used most efficiently (23 percent);
- ☐ Listen to others and show understanding of what they are saying (23 percent);
- ☐ Set a good example for employees (23 percent);
- ☐ Explain tasks so that employees clearly understand their duties (22 percent); and
- ☐ Show respect and support for employees (22 percent).⁹⁰

Generally, as mentioned above, blue-collar workers' views from our 1989 and 1991 sources suggest that their supervisors may be experiencing even more problems in these areas than white-collar supervisors. Any future study of blue-collar supervisor quality must look beyond the individual supervisors and include an analysis of the whole system. While there are no doubt many excellent supervisors, a variety of other factors such as organizational structure, culture, mission, budget constraints, and public opinion may affect how well first-line supervisors are able to perform their jobs. OPM identified some of these potential factors when it studied the delegations of personnel management authorities among white-collar supervisors.

In a survey of 185 Federal installations, OPM found that only 7 of 32 personnel management authorities had been formally delegated "in full" to white-collar first-line supervisors by more than half the installations. Moreover, a separate survey of nearly 5,000 white-collar supervisors found that first-line supervisors perceived themselves to have even less authority than that which they had been formally delegated. Contrary to these findings, OPM had expected that all or many of the more basic supervisory responsibilities (e.g., determinations of duties, training needs, and work schedules; certification of the accuracy of position descriptions; and approval of probationary periods, within-grade increases, leave, and excused absences) would have been delegated to first-line supervisors at virtually all installations in line with OPM's general directives

⁹⁰ Ibid., pp. 12-13.

Other Blue-Collar Workforce Issues

towards greater delegations and decentralization of authorities. Proceeding from the premise that such "delegations of personnel management authorities generally are the most effective way of managing the Federal Government's business," OPM concluded that the levels of actual and perceived delegation they found may not be fostering good management.⁹¹

Most RIF's reduce current technical skills. For instance, most of the relevant technical expertise comes from military technical training. Those just recently hired with this expertise are normally the first to be adversely affected, reducing the Government's capabilities.

Sheetmetal Mechanic, WG-10

Indicating that the problems may be even greater in the blue-collar workforce were repeated comments during our group interviews suggesting that supervisors of blue-collar employees—whether white-collar, blue-collar, or military supervisors—may be delegated even fewer personnel management responsibilities than their white-collar counterparts. If so, this situation would help account for a number of the blue-collar attitudes and concerns described in this report. It may also identify areas where focused management attention and training may be able to effect particularly large positive payoffs.

Performance Appraisal

Problems with the use of standards and elements to assess subordinates' performance (as identified in the MSPB study of first-line supervisor quality) are not unique to white-collar supervisors. The topic of performance appraisal precipitated particularly heated comments during our group interviews with

supervisors as well as nonsupervisors. There were few disagreements among the participants within the groups and virtually everyone indicated there are problems with performance appraisals as they are currently implemented. Citing favoritism in the ratings, participants made repeated calls to "eliminate the performance appraisal system." The workers we interviewed often perceived performance appraisals as little more than "disciplinary tools or deterrents" used by management to control the workforce. Some workers argued that "there are too many elements and subelements" and that "one can't possibly meet them all." In addition, some claimed that "one early mistake is reflected on your performance appraisal for the rest of the year."

The award of additional "length of service" credit (based on performance ratings) in establishing retention order during a reduction in force was raised on a number of occasions in our interviews. However, many of the nonsupervisors and supervisors did not know precisely how this worked, and more than a few of the participants in the group interviews first learned about this provision during the interview.

In the FY 1989 MPS, over 90 percent of both blue- and white-collar employees reported that they had

Increase in morale would help increase productivity and quality of work. Some ways to increase morale would be to do away with the present appraisal system. Most people would rather be appraised by coworkers than one supervisor.

Electronic Measurement Equipment Mechanic,
WG-10

received and understood their performance ratings, as shown in table 14. About equal proportions, approximately one-fourth for each group, had received ratings of "outstanding." Even though 59

⁹¹ U.S. Office of Personnel Management, "Delegation of Personnel Management Authority," OPM GWR 91-3, Washington, DC, January 1992, pp. 2-3.

Other Blue-Collar Workforce Issues

Table 14. Performance Appraisal: Attitudes of Federal Blue-Collar and White-Collar Employees

Question (Response)	Percent Responding		
	Blue-Collar	Diff. ¹	White-Collar
Performance Appraisals/Pay for Performance			
Extent of involvement in determining performance elements/standards (Little or No)	69	+14	55
Likelihood of more pay for better performance (Unlikely)	61	+9	52
Likelihood of non-pay rewards for better performance (Unlikely)	61	+9	52
Salaries for people in my job should be based on geographic location (Agree)	63	+5	58
The performance appraisal process should limit number of high ratings (Agree)	27	+6	21
I understand the performance standards for my job (Agree)	94	+4	90
A portion of my pay should be based on workgroup performance (Agree)	25	+3	22
Performance ratings (percent outstanding)	26	+1	25
Supervisor should have more control over my compensation (Agree)	37	-4	41
If I had a choice, I would choose to be put under a pay-for-performance system (Agree)	37	-6	43
My performance rating presented an accurate picture of my job performance (Agree)	59	-6	65
A portion of my pay should be based on how well I perform (Agree)	67	-6	73
Likelihood of more informal recognition for better performance (Likely)	54	-12	62
Extent of 1st-line supervisor input into performance rating (Considerable/Great Extent)	75	-12	87

¹ "Diff" refers to the difference in the percent of blue- and white-collar employees responding to the item, arranged from maximum difference in one direction to maximum difference in the other direction.

Note: Both the blue- and white-collar data include responses from supervisors.

Source: 1989 Merit Principles Survey. Questions are slightly edited to facilitate the presentation.

percent of the blue-collar employees indicated that their performance appraisal ratings accurately reflected their job performance, blue-collar employees were consistently more negative about their performance ratings than white-collar employees.

More than two-thirds (69 percent) of the blue-collar employees reported that they had had little or no involvement in determining their performance appraisal standards, and about 60 percent thought it was *unlikely* that better performance would result

in either more pay or a nonpay reward. Although 75 percent of the blue-collar employees believed that their first-line supervisors should have considerable input into their performance appraisal ratings, this was 12 percent less than for white-collar employees.

The blue-collar first-line supervisors we interviewed had their own views about performance appraisals. A number of supervisors claimed that it was unfair for them to be held accountable for

Other Blue-Collar Workforce Issues

subordinates' sick leave usage, when they can't include it on the subordinates' performance appraisals. Others noted the difficulties involved in doing 20, 30, 40, or more subordinates' appraisals. Performance appraisals were particularly difficult when they knew relatively little about the performance of the employees they had to rate, because the employees were on frequent details, worked on other shifts, or were otherwise not observable during the rating period.

The supervisors expressed powerlessness in being able to remove or motivate "problem" subordinate employees. The system or process for removing a subordinate for poor performance was viewed as "almost impossible to implement." Several supervisors noted that every group seems to have at least one employee who needs to be "motivated by the stick." These "bad apples really hurt morale," and "we can't fire anyone." Subordinates were viewed by some supervisors as having "too many avenues to complain." They are "savvy and know how to use the system."

In 1987, GAO conducted a study of blue-collar appraisal systems and noted that even though such appraisal systems were in place, they had considerable problems.⁹² These problems included standards that were not clearly stated, did not distinguish among all levels of performance, were not measurable, were based on uncontrollable external factors, or were inappropriately based on personal traits that were not clearly performance-related.

To follow up on the comments made during our study interviews and the observations made by GAO in 1987, we obtained copies of typical performance standards used for appraising low-, medium-, and high-graded blue-collar employees. Even a cursory review of this limited sample of 16 standards from 4 of the installations we visited suggests that considerable improvements might be made in this area and that many of the deficiencies noted by GAO in 1987 remain.

For example, the standards confirmed that at least some blue-collar employees are being rated on rather large numbers of elements and a wide range of job tasks. At least some agencies seem to have taken performance appraisal in a direction found not to be particularly viable according to a National Research Council Report evaluating performance appraisal and merit pay in the Federal Government. In the context of personnel management decisions, the goal of a performance appraisal system should be to support and encourage informed managerial judgment. There is little to be gained from a search for a level of precision in measurement comparable to that of, for example, a selection test.⁹³

As an example of the large number of elements in use, we found performance standards for 14 elements (7 of them critical) for a laborer (WG-3), 12 elements for a motor vehicle operator (WG-5), and 16 elements for a maintenance mechanics supervisor (WS-9) in a single installation we visited.

Elsewhere, other elements appeared particularly complex, such as the following "safety" element for a WG-5 woodcrafter:

This element will be graded on performance of the following subelements:

- a. Observed in area without proper personal protective equipment (PPE)
- b. Working in area without proper PPE
- c. Observed or involved in an unsafe work practice
- d. Injury caused by unsafe work practice or not using PPE
- e. Lost-time injury where employee is at fault
- f. Operating vehicle without a license
- g. Unsafe vehicle operation
- h. Unsafe vehicle operation resulting in an accident

⁹² U.S. General Accounting Office, "Blue-Collar Workers: Appraisal Systems are in Place, but Basic Refinements are Needed," GAO/ GGD-87-72, Washington, DC, June 1987, pp. 2-3.

⁹³ G.T. Milkovich and A.K. Wigdor, eds., "Pay for Performance: Evaluating Performance Appraisal and Merit Pay," Report of the National Research Council Committee on Performance Appraisal for Merit Pay, National Academy Press, Washington, DC, 1991, p. 3.

Rating Levels:

Above Fully Successful: "No" on all subelements

Fully successful: "No" on *c* through *h* and no more than one incidence stated in *a* or *b*

Below Fully Successful: "Yes" on *d*, *e*, *f*, *g* or *h* or more than one incidence stated in *a*, *b*, or *c*.

The performance-relatedness and the meaning of the criteria for *exceeding* "satisfactory" performance were less than clear for the following "Teamwork" standard for Teletype Mechanics (WG-10) at another installation:

Employee will exhibit a positive team effort in accomplishing assigned tasks.

- a. Employee will demonstrate teamwork through participative support or operations that improve upon the process.
- b. Employee will verbally support the team concept within the section and promote cooperation in achieving mission assignments.
- c. Actively participates in teamwork training and strives to implement teamwork philosophy in the work center assigned.

A "met" rating would be indicated by satisfactory compliance with paragraphs *a*, *b*, and *c* above.

Finally, it was not clear how a supervisor would rate a WG-10 rigger on the following critical element and standard in use at still another installation:

Element: Adaptability, the ability to respond to changes of work assignments, shop methods, and procedures.

Standard: No more than one instance of employee's inability to adapt to changes in work assignments during the rating period.

These limited examples of performance appraisal standards and elements do not tell the whole story. It has been suggested that performance appraisals are expected to meet too many objectives, some of which may be conflicting.⁹⁴ This multitude of purposes was illustrated in the performance appraisal instructions of one installation we visited which listed 16 different ways in which it proposed to use performance appraisal ratings.

The ready emergence of the preceding examples of troublesome performance standards, the repeated reports of some supervisors having to rate large numbers of subordinates, and the numerous complaints from subordinates suggest that blue-collar performance appraisal is one area where considerable improvements may be needed. Clearly, although there are other factors, problems with the performance appraisal process can contribute adversely to the morale of the work unit. Some of the problems clearly stem from the standards themselves, as illustrated above, and could probably be resolved with appropriate training for supervisors and managers who primarily develop the standards.

The performance appraisal issues discussed above are not likely to have easy solutions. However, the intensity and frequency with which they were raised by both the nonsupervisors and supervisors in the group interviews, the potentially serious nature of some of the problems, and the impact performance ratings have on the morale of blue-collar employees and on RIF retention lists suggest the need for a closer examination of how the performance appraisal process is being managed for the blue-collar component of the Federal workforce.

Training

A fourth major topic that emerged during the course of the study was that of training. Except for general morale, supervision, and performance appraisals, training was the most frequently mentioned issue during the group interviews. The needs and calls for training were persistent and pervasive.

⁹⁴ John M. Palguta, "Performance Management and Pay for Performance," A presentation before two OPM-convened committees, the Pay-for-Performance Labor-Management Committee and the Performance Management and Recognition System Review Committee, Washington, DC, May 6, 1991.

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Table 15. Training: Attitudes of Federal Blue-Collar and White-Collar Employees

Question (Response)	Percent Responding		
	Blue-Collar	Diff. ¹	White-Collar
Training			
Job makes good use of my skills	69	+1	68
I have the skills I need to do my job	94	0	94
Nature of my work has changed substantially over last 3 years	36	-8	44
I have received the training needed to keep pace with my job changes	38	-14	52
I am being trained on new technology	32	-20	52
Extent of fair treatment in training (Great or Considerable)	26	-11	37

¹ "Diff" refers to the difference in the percent of blue- and white-collar employees responding to the item, arranged from maximum difference in one direction to maximum difference in the other direction.

Note: Both the blue- and white-collar data include responses from supervisors.

Source: 1989 Merit Principles Survey. Questions are slightly edited to facilitate the presentation.

The needs for training seem to vary considerably. Organizations with little inhouse training capability typically hire at the journey level for positions that do not require Government-specific knowledges and skills—e.g., carpenters. However, for other positions, the Government often must provide the specific training required to perform the job. With few exceptions, such as the Navy's apprentice program, the training of blue-collar employees was characterized as "informal" and "piecemeal" by the employees we interviewed. Most training was decentralized at the installation level. Training is typically limited in focus and targeted to specific knowledges and skills.

Although the nature of blue-collar work is generally thought to change less than white-collar work, responses on the MPS suggest that this difference may not be very large, as is shown in table 15. Almost as many blue- as white-collar employees (36 percent vs. 44 percent) reported that the nature of

their job had changed in the last 3 years. Despite this prevalence of change, only 38 percent of the blue-collar employees said they had the training needed to *keep pace with the changes*, and even fewer (32 percent) said they were *trained on new technology*. These percentages were substantially lower than those for white-collar employees, 52 percent of whom reported having received these two types of training.

One of the most rigorous and formal inhouse training programs is the Navy's apprentice program. Although this program has been cut back considerably, a Navy task force reports that it remains highly valued by the shipyards and aviation depots and remains the Navy's primary way of assuring a core of workers with the high levels of industrial skills required for work on sophisticated weapons systems, ships, and aircraft. Workers with these required skills are not generally available on the open market and are expected to be even less so

Other Blue-Collar Workforce Issues

in the future.⁹⁵ Generally, the apprentice program, in 4 years, provides selected candidates with about 1 year of academics and trade theory, followed by specific on-the-job training and rotational assignments. Candidates are trained to be broadly qualified in their trades, to perform journey-level work upon graduation, and eventually to provide a potential source of key personnel for higher level decisionmaking positions.

Quality can be improved through better training.

Production Machinery Mechanic, WG-10

Training is one of management's most powerful and necessary tools in any strategy for organizational change. Recognizing the potential of training, OPM recently consolidated its training and development functions into a single organizational unit, the Human Resources and Development Group. The unit was put on a par with other major OPM functions to strengthen human resources development in the Federal Government, through eight major initiatives, including requirements for agencies to systematically assess training needs and conduct orientation programs for new employees.⁹⁶

It is generally recognized that training can meet a wide range of management objectives. Among these are: successful job performance; keeping current with new technologies; full worker use of safety procedures; appropriate attention to environmental concerns; advancement to higher level positions; and job enrichment. For agencies faced with personnel cuts, cross-training can help increase the flexibility of the remaining workforce and develop a workforce to meet future workload needs. In addition, in occupations that have seen relatively

little change and where employees have been working at the top grade and step for a number of years, opportunities for advancement or cross-training in other occupations may be particularly welcome and reinvigorating to workers whose motivation may have diminished over time. Often, the costs for such training are quickly offset by the increased flexibility the organization achieves to meet fluctuations in workloads. Organizations with surplus jobs in one area and shortages in another may be able to provide retraining opportunities to those in surplus jobs to fill vacancies in shortage categories.

Training and retraining strategies need to consider not only an organization's short-term workforce requirements, but also those that are more long-range. This won't be an easy undertaking, and it may warrant greater centralized planning. In the long run, well-targeted, needs-based training investments can reduce rather than increase costs to an organization.⁹⁷ Such cost saving might be achieved through alternative training strategies, new computer and video-based delivery systems, increased use of apprenticeships, cooperative education programs, structured on-the-job training, and partnerships among agencies, educational institutions, and professional organizations.

OPM's initiative to push agencies to help employees evaluate their skills, find out what they need to keep their jobs in the future, and learn where to get training to help them move up,⁹⁸ is a step in the right direction. Such skill clinics are typically voluntary, confidential, and designed to help everyone from clerical employees to managers. While skills clinics apparently aren't widespread, they provide a potentially useful training and development tool.

In addition to new technology on the job, recent years have seen an explosion in the number of

⁹⁵ U.S. Department of the Navy, Office of Civilian Personnel Management "Department of the Navy Apprentice Program Task Force Report," Arlington, VA, DC, January 1990, p. 2.

⁹⁶ Constance B. Newman, "Human Resources Development Policy Initiatives," Memorandum for heads of departments and independent agencies, Jan. 10, 1992.

⁹⁷ Robert J. Agresta, "Renaissance in Human Resources Development: Can We Afford It?" *The Public Manager*, Spring 1992, pp. 33-37.

⁹⁸ Leigh Rivenbark, "Career Clinics Build Skills, Job Security," *Federal Times*, July 13, 1992, pp. 1, 22.

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environmental, health, and safety regulations that affect blue-collar work. For example, many blue-collar employees have had to become more fully aware of the dangers of asbestos, PCB's (polychlorinated biphenyls), and similarly hazardous substances that often were used in the construction and operation of many Federal installations. Many blue-collar employees must know the latest procedures and safeguards for working with or near potentially harmful substances.

The 1989 MPS data support the views expressed in our interviews that blue-collar employees may not be receiving as much training as they need. It must also be considered that any differences in the amount of training blue-collar employees receive relative to white-collar employees may reflect real differences in these two groups' training needs.

To the extent possible, OPM and the agencies should explicitly include blue-collar training in their strategic training plans. This is to help ensure that training programs and allocations of training funds (developed and administered by white-collar trainers and managers) are not disproportionately directed towards the larger and more visible white-collar workforce.

Unless OPM and the agencies track training explicitly for blue-collar employees, it will be difficult to determine if blue-collar employees are receiving the training they need. Currently, training tends not to be tracked separately for blue-collar employees, although some planned systems will have that capability once they are implemented.

Conclusions and Recommendations

Clearly, the Federal blue-collar workforce is a workforce in transition and one that is confronted with many challenges. The 20-year decline in its size may pale against the sudden and deep cuts projected for the 1990's. Policymakers and managers of blue-collar employees, particularly those in the defense agencies, are being called upon to make difficult, far-reaching decisions. In the balance lies the future of our Government's industrial capability and the role of a large share of its blue-collar workforce.

The challenges are multidimensional and the issues are complex, particularly in the blue-collar workforce, but also in organizations where white-collar workers are affected by downsizing. On the one hand managers must address how to provide alternative employment for workers losing their jobs, while on the other hand they must address how best to motivate and revitalize those who remain. Some of the challenges require long-range strategies, while others must be met almost immediately. In addition to having to deal with the complexity of the challenges, decisionmakers will often find themselves forced to make decisions on the basis of insufficient information, particularly about the blue-collar component of the Federal workforce.

Although the impact of the recent and continuing Federal workforce changes are not affecting blue-collar employees alone, blue-collar employees are expected to continue to experience a disproportionate share of the downsizing activities. Consequently, it is important that their concerns be appropriately considered in decisions affecting their

future employment. And, to the extent that their concerns and needs differ from those of their white-collar coworkers, different remedies may be required.

Minimize the Adverse Effects of Downsizing

Agencies directly involved in downsizing activities have the immediate and grave responsibility of exploring every reasonable option for retaining qualified employees—both blue- and white-collar—whose jobs are being abolished. Upcoming defense cuts are expected to be deep—over 200,000 civilian positions through FY 1997—and will affect different installations unevenly. DOD and OPM managers no longer believe that existing placement programs can adequately support the number of displaced Federal workers expected from these cutbacks.⁹⁹ Hiring freezes and attrition alone may not be able to absorb all of the impending personnel cuts. Placement programs are becoming increasingly saturated, and local area labor markets will be able to provide fewer and fewer opportunities.

OPM, DOD, and other Federal agencies should continue to closely monitor the effects of the Government's downsizing activities. The effects of downsizing need to be tracked closely to ensure that they do not have unanticipated adverse effects on the organizations or inflict unnecessary hard-

⁹⁹ See p. 12 of the source in footnote 78.

Conclusions and Recommendations

ships on those being displaced. Managers and policymakers should provide sufficient resources to identify, develop, and improve on alternatives to unwanted job losses, such as outplacement assistance, selective application of bonuses for early retirements, retraining, skill clinics, voluntary and mandatory reductions of work hours, job sharing, and downgrades.

OPM and DOD should increase their effort to improve the impact of downsizing activities. OPM and DOD are encouraged to examine the Government's downsizing activities and to learn from the experiences. OPM is encouraged to take the lead and to consolidate these lessons learned, to centralize information about downsizing and workforce planning strategies, and to provide managers faced with personnel cutbacks the information and resources they need to best reduce their workforce. OPM's recently announced electronic bulletin board to provide agencies with immediate access to the latest RIF regulations is a positive contribution along these lines.

Improve Workforce Planning

Workforce planning needs to occur on a variety of levels. While individual organizations need to identify their current and future workloads and identify the mix of skills needed to perform the work, planning is also needed across organizations, and ultimately Governmentwide. While the downsizing of military personnel is highly centralized, current civilian downsizing initiatives are largely decentralized. Although there are certain advantages to this approach, many of the assistance programs, potential resources, and employment options extend beyond the organizational level.

Agency managers should examine closely what their organizations do, how they do it, and how it should be done in developing their long-range workforce plans. This may require a greater allocation of resources and technical expertise for workforce planning than is currently allocated for this pur-

pose. Consideration of downsizing staffing issues are most appropriate after organizations have closely examined their future mission, workload, and skill resources.

OPM and Federal agencies are encouraged to develop broad workload and staffing strategies. Where possible, such strategies should cut across the armed services, other Federal agencies, and the private sector and include an explicit consideration of the Government's industrial capability and the livelihood of its blue-collar employees. Such strategies would address not only the needs of the employees involved but also the long-term needs of the Nation.

OPM is strongly encouraged to take a greater leadership role in assisting agencies in their workforce planning strategies and in promoting more effective position management. This recommendation echoes a recommendation made in 1987 by GAO.¹⁰⁰ Given recent findings that agencies continue to have difficulties in predicting workloads and developing workforce strategies, OPM leadership and guidance in these areas would be helpful.

Promote Participative Management Practices

Although the Administration and Congress make the macro-level decisions about the future of the Government's industrial base and the blue-collar workforce, Federal managers and OPM also have roles to play.

Federal managers should strive to increase communication with their blue-collar employees and to counteract blue-collar perceptions of treatment as "second class citizens." Managers and supervisors are strongly encouraged to make immediate efforts towards greater cooperation and teamwork in the workplace and to identify and break down barriers to collaboration and greater productivity. These include not only barriers between blue- and white-collar workers, subordinates and supervisors,

¹⁰⁰ U.S. General Accounting Office, "Managing Human Resources: Greater OPM Leadership Needed to Address Critical Challenges," GAO/GGD-89-19, Washington, DC, June 1987, pp. 48-52.

Conclusions and Recommendations

management and labor, but also barriers that continue to contribute to the underrepresentation of women and Hispanics in the blue-collar workforce.

Agency managers are encouraged to tap the expertise of their blue-collar workforce. Managers of blue-collar employees should give blue-collar employees greater opportunities to participate in the decisions affecting their work and should actively encourage their participation in the decisionmaking process. By actively promoting and implementing participative management principles, managers may expect to enrich the work, empower and motivate the workforce, increase productivity, and enhance the image of the Government as an employer.

The Board encourages OPM to expand its leadership in the implementation of participative management techniques and to continue its efforts to promote more productive and constructive labor-management relations. Such leadership is particularly relevant to the blue-collar work setting, which is characterized both by high union involvement and extensive implementation of participative management principles. These principles—properly implemented and sustained by agency managers—address many of the blue-collar issues and concerns that surfaced during this study. Properly implemented initiatives can help improve morale, counter the blue-collar workers' perceptions that they are treated as second-class citizens, improve training, and enhance the quality of supervision.

Remove the Pay Cap and Reform Pay-Setting Procedures

OPM is encouraged to collaborate with Congress to develop a strategy for phasing out the blue-collar pay cap and to help restore the integrity of the Government's locality-based blue-collar pay system. The blue-collar pay cap remains an important symbol of inequitable treatment and continues to be perceived as an unfair restriction on the blue-collar pay-setting system. Although aggregated attrition data suggest that any negative influences of the pay caps are not sufficient at this time to cause large numbers of blue-collar employees to leave the Government, Federal policymakers need to ensure

that the problems beginning to be felt in some locations or for some grade levels do not further impair the Government's ability to attract and retain a high-quality blue-collar workforce. At virtually all the installations we visited, managers and supervisors reported some difficulties recruiting and retaining qualified blue-collar workers in some jobs.

OPM should begin a nationwide discussion of ways in which blue- and white-collar pay systems might be more closely aligned. As long as the two pay systems contain major differences in how comparability is set, there will be the destructive perceptions of inequitable treatment. Although there will always be some differences, the current formula for setting blue-collar pay relative to that for setting the comparability of white-collar pay needs to be addressed. Educating both blue- and white-collar employees about each others' pay systems would be a first step towards designing more equitable pay systems for all Federal employees. However, this discussion should extend beyond cost considerations and simple alignment of the two pay-setting systems. It should also include broader discussions about blue-collar employment, such as the structure of work or the opportunities for advancement. Although pay is a factor, many other factors besides pay affect how blue-collar employees view and judge the equity of their treatment.

Improve Supervision

Agency managers should examine the quality of supervisors of blue-collar employees. Although there are many excellent supervisors of blue-collar employees, there are also those who would benefit from additional training or changes in organizational systems. Among the system changes to consider are: increasing the authorities delegated to the first-line supervisors, providing greater administrative and upper management support, and ensuring that the number of subordinates assigned to any single supervisor does not exceed sound management practices. High-quality supervisors—blue- and white-collar—can best achieve the objectives of the organization, if they are properly trained and if organizational systems do not unnecessarily constrain their ability to supervise.

Conclusions and Recommendations

Enhance Training

OPM should take the lead, and other Federal agencies, particularly those in DOD, should move towards a philosophy of continuous education, training, and development of blue-collar employees.

Such a philosophy, when translated into programs for blue- and white-collar employees alike, is an important first step towards a more productive and responsive workforce and is likely to enhance the public's image of the Government as a provider of services and as a model employer. Such programs should include the design of career development programs for blue-collar employees in jobs which currently provide little hope for advancement.

Training of blue-collar employees is an area where organizational payoffs for investments may be considerable. Training and cross-training of blue-collar employees when workloads are low are wise investments for future times. Training can revitalize and make workers more productive, particularly those workers who have been trained on only a few routine and limited skills.

A possible first step towards enhancing the training of blue-collar employees is for OPM and the agencies to begin tracking training separately for blue- and white-collar employees. Without such separate tracking, it is difficult for policymakers and managers to determine the amount of training blue-collar employees—as a group—receive compared to their white-collar colleagues.

Review Performance Appraisal Practices

OPM and other Federal agencies should begin to review existing blue-collar performance appraisal practices. Such a review should examine performance appraisal standards to ensure they are not unduly restrictive and punitive in nature and that they are clearly stated and understandable, performance-related, measurable, within the control of the employee, and administered equitably.

Summary

All the Government's downsizing, merging, consolidating, and restructuring need to be seen as opportunities for renewal, opportunities for growth, opportunities to learn new management techniques, and opportunities to improve service to the American public. While the recommended activities focus on blue-collar employees, they are often most efficiently performed in conjunction with activities focused on white-collar employees. However, because so little is known about the blue-collar workforce, it is important to include them in studies of the workforce and to track them separately. Unless training, awards, career progression, and similar data are tracked separately for blue- and white-collar employees, it is impossible to identify any shortcomings or inequities between the two groups.

Because blue-collar employees often have views and concerns different from those of their white-collar coworkers, policymakers and decisionmakers are encouraged to obtain and consider the views of blue-collar employees in decisions affecting this workforce and to tailor their decisions, as appropriate.

Planning for the workloads and workforce of the future provides opportunities to ask the tough questions: Is it necessary to do this work? If so, is it necessary to do it in the same way and with the same people? Can jobs be redesigned and made more rewarding? More satisfying? More challenging? How can work roles, organizational structures, and management relationships be improved? Work quality and productivity? The effects of such work redesigns on traditional personnel systems will be enormous. Blue- and white-collar distinctions are likely to blur, and classification, reward, and compensation systems will shift their focus from individuals and positions to groups and group outputs and move towards compensation based on how much knowledge a worker has or the number of different skills they possess. Such an agenda strikes at the heart of many Federal jobs—blue- and white-collar—that today that may be viewed as "deadend," routine, and incapable of generating real motivation, or job satisfaction. It's an agenda befitting a model employer.

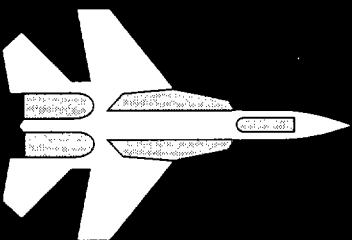
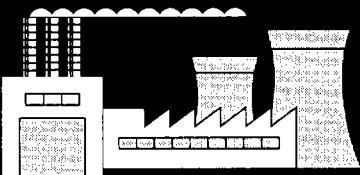
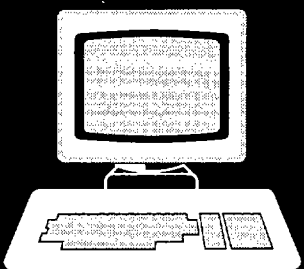
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